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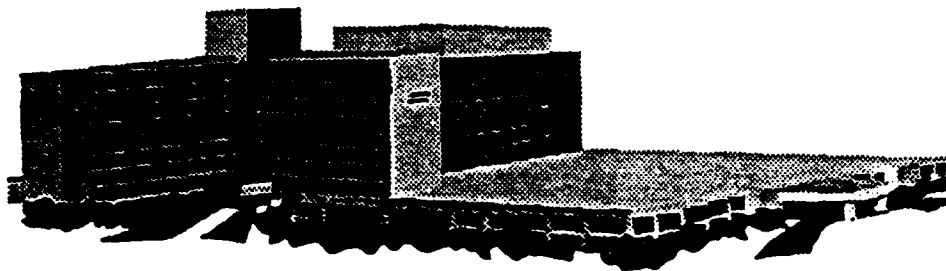
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**PROVIDER NETWORK DEVELOPMENT UNDER THE DEPARTMENT
OF DEFENSE COORDINATED CARE PROGRAM:
A METHODOLOGY FOR PRIMARY CARE NETWORK DEVELOPMENT
AND ITS IMPLEMENTATION IN THE SAN ANTONIO SERVICE AREA**




A Graduate Management Project
Submitted to the Faculty of
Baylor University
In Partial Fulfillment of the
Requirements for the Degree
of
Master of Health Administration
by

Captain Kenneth P. Bonner, USAF, MSC

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ABSTRACT

The need for reform of the nation's health care system has been discussed for several decades. Recently, however, this debate has taken on a new sense of urgency. Health care reform has become a popular topic in Washington D.C. and was a major campaign issue in the 1992 Presidential race.

The future of the Military Health Services System (MHSS) rests on the ability of executive management to plan and provide comprehensive health care services required to meet the needs of the beneficiary population in the most cost efficient manner. A comprehensive managed care plan provides the framework necessary to accomplish this task. The foundation of this plan rests on the development of an appropriate and cost-efficient primary care network.

Network development can be accomplished by: (1) setting up a local network by contracting through competitive procurement, (2) contracting with a local network already in existence, or (3) developing your own local network utilizing MHSS resources to the fullest extent and seeking arrangements with local civilian providers through provider agreements or competitive procurement (CBO Papers, 1991). This study identifies a planning process and implementation plan

that a catchment area staff could follow to develop their own primary care network under Coordinated Care Program (CCP). Some tailoring based upon the differences in strategy, beneficiary population and available local resources would have to be made on an area by area basis.

This graduate management project (GMP) addresses the issue of primary care network development. One of the most important components of any managed care program is the health care providers that make-up the primary care delivery network. The development of a network must address; requirements for participating providers, adequate number and mix of providers, primary care availability, specialist availability, adequate delivery sites, emergency services, office wait times, appointment wait times, and handicapped accessibility (Boland, 1991).

CHAPTER 1

INTRODUCTION

Conditions Which Prompted the Study

Health care spending, as a percent, has grown faster than national income for the past two decades (The Public Agenda Foundation, 1992). Health care is in a crisis of seemingly uncontrollable cost increases, yet our health indicators have not improved (e.g., infant mortality, adult mortality, morbidity, or life expectancy).

The aging population, the rise in family incomes, and the labor intensive nature of health care services have been partly responsible for this growth. In addition, the steady stream of new medical procedures and technologies have often raised costs. Public and private insurance have helped fuel this escalation by providing a ready source of funding with little accountability for cost or quality. Monetary judgments against hospitals and health care providers in major lawsuits have also been a factor contributing to higher health care costs (Meyer, Sullivan, & Silow-Carroll, 1990). According to a Rand Corporation Study, as much as one-third of the \$700 billion spent in the United States for health care may be for unnecessary services (The Public Agenda Foundation, 1992).

There are many proposals circulating on how to answer these concerns and solve the health care crisis. Managed care seems to be the only present solution being discussed. Managed care works if employers and providers share a mutual commitment to making it work. Success means compromise. Success means sharing the risks associated with delivering health care services.

It appears that current federal legislative thinking strongly favors the managed care (e.g., health maintenance organization (HMO)) approach as the best method to control costs, improve access and maintain the quality of health care (Pitt et al, 1989). Managed care is rapidly becoming the dominant way to finance and deliver healthcare, because it encompasses both HMOs and Preferred Provider Organizations (PPOs) and it simultaneously affects price, volume, quality, and accountability (Boland, 1988 and CBO Papers, 1991).

What is Managed Care?

According to the American Hospital Association managed care is, "An organized program to control access to health services, designed to ensure the medical necessity of the proposed services and the delivery of the service at the most cost-efficient level of care" (AHA, 1991).

Simply stated, managed care is a strategy that

manages the delivery of health care in such a way that the cost is controlled (Kongstvedt, 1989). To accomplish this, managed care introduces incentives, penalties, or administrative procedures, into the doctor-patient relationship to modify the decision-making process of physicians and hospitals; thereby, influencing when, where, and how care is provided (CBO Papers, 1991).

The term "managed care" is deceptive and covers a lot of territory. Managed care refers to those health care delivery and reimbursement arrangements in which the buyers actively manage the use and costs of covered health services by plan enrollees (Maurer, 1988). Coile (1990), refers to managed care as "contract medicine". Under managed care arrangements, the delivery of health services to enrollees will be tightly defined in formal contracts that will be the lifeline of tomorrow's hospitals and MDs (Coile, 1990).

Features common to managed care plans include prenegotiated payment rates, mandatory prior authorization and utilization review requirements, limited provider choice, and fixed-price reimbursement (per day, stay, diagnosis, or procedure). Most managed care plans either capitate provider payments (per enrollee, per month or year) or require at least

partial provider risk sharing.

The managed care model which most companies regard as most efficient includes a preferred provider network with a negotiated fee schedule, an HMO with cost containment and utilization review features, and an indemnity program because it allows employees freedom of choice ("Companies Explore," 1991).

Traditionally, quality health care has been thought to mean having an unlimited choice of physicians, more services and treatments, and higher costs (Relman, 1992). Under managed care, quality means each patient is able to receive the best and most appropriate care every time (Boland, 1991). In order to guarantee this level of access, the provider network must satisfy the market needs and demands. Therefore, it is very important to develop a network of high quality, cost effective, collaborative providers; both hospitals and physicians (Boland, 1991).

National and Department of Defense Trends

The United States currently spends approximately 12% of the GNP on health care. Many sources predict that by the year 2000, the U.S. will spend 15 - 17.5% of the GNP on health care (Meyer, Sullivan, & Silow-Carroll, 1990). Some factors that add to the high costs are the continual advances in medical technology,

our aging population, the labor intensive nature of the industry, and our population's expectations on the quality and scope of services provided. Just as spending on health care has been constantly increasing in the civilian sector, so has it been ever-increasing in the Department of Defense (DoD) (CBO Papers, 1991).

DoD runs one of the nation's largest multi-hospital system and health care delivery system. It includes approximately 125 hospitals in the U.S., more than 400 separate clinics, and the Civilian Health and Medical Programs of the Uniformed Services (CHAMPUS) (CBO Papers, 1991).

CHAMPUS is a traditional indemnity insurance plan that allows military beneficiaries to receive medical care by civilian providers of their choice and pays a large portion of the bill (CBO Papers, 1991). In 1984, 2.8% of the DoD budget (\$7.2 billion) was spent on health care. By 1990, health care absorbed \$14.1 billion of the Defense budget, a 2% increase. CHAMPUS accounted for the fastest growth, increasing by 150% from 1984 to 1990 (CBO Papers, 1991).

Health care cost pressures have directly or indirectly catalyzed the many changes the health care industry is now undergoing. The current focal point of these changes has become managed care (GHAA, 1991).

Managed care provides a viable health benefit alternative for those with the purchasing power; employers, employee groups, and especially the government (Lee, Goldstein, and Rodman, 1990).

Managed Care Programs: Defined

HMOs and PPOs have been misrepresented or misunderstood and are if anything very confusing at times. Yet, knowledge of a few key definitions makes an understanding of the managed care programs easier.

Health Maintenance Organization (HMO)

HMOs are distinguished from PPOs in that they assume responsibility for providing a comprehensive range of health services to a voluntarily enrolled population of a fixed annual premium (Smith & Reid, 1986). HMOs are categorized based on the type of contractual arrangement entered into by the HMO with physicians. A *Staff Model* HMO includes employment by the HMO of the physicians (Example: Kaiser); a *Group Model* HMO is characterized by a contract between the HMO and an integrated group of physicians who spend the majority if not all of their time servicing HMO patients and working together in group practice (Example: Prucare); *Network Model* HMOs include contracts between the HMO and several group practices and/or individual physicians (Example: Cigna); and *IPA*

Model HMOs are characterized by contracts between the HMO and IPA which are organized by physicians to serve as contracting vehicle without fully integrating the practices of the individual physicians into the IPA organization (Example: Blue Cross (HMO)) (Kongstvedt, 1989). Another HMO is the *Direct Contract Model*. As the name implies, HMOs contract directly with individual physicians. These HMOs recruit broad panels of physicians, both primary care and specialists and usually use a primary care manager or "gatekeeper" (Kongstvedt, 1989).

A *closed panel* is a managed care plan that contracts with physicians on an exclusive basis for services, not allowing members to see physicians outside of the limited exclusive panel of providers for routine care. An *open panel* is a managed care plan that contracts with private physicians to deliver care in their own offices (Kongstvedt, 1989).

STRONGER		WEAKER	

STAFF MODEL	GROUP MODEL	NETWORK MODEL	IPA MODEL

Figure 1 Degree of Control by HMO

The major distinction between an open panel and a closed panel HMO is the degree of control they maintain over member utilization of out-of-network services

Figure 1).

Staff and group models are often referred to as *closed panel* because their physicians typically see only HMO patients. In contrast, IPA, network, and direct contract models are *open panel*, because participating physicians have both HMO and fee-for-service patients. These distinctions are becoming blurred, however, as the health plans adapt to increasing competition by developing multiple products to offer consumers (Kongstvedt, 1989).

Preferred Provider Organization (PPO)

Unlike capitated systems, or systems that lock in patients, such as an HMO, the providers in the true PPO are not at risk (Smith & Reid, 1986 and Kongstvedt, 1989). Providers in the PPO accept utilization management and the PPO's reimbursement structure and payment levels (Kongstvedt, 1989).

A PPO is a health financing and delivery arrangement in which a group of health care providers offers its services on a predetermined financial basis to health care purchasers under terms which encourage the selection of the providers as the source of services to sponsored individuals (Tibbits & Mauzano, 1984). Most PPOs share the following characteristics: a health care provider panel, negotiated fee schedules

or discounts from routine charges, strong utilization review processes and controls, incentives for consumer selection through co-payment mechanisms without eliminating choice of providers by the consumers, and expeditious claims processing to enhance cash flow (Jackovitz, 1984).

In a PPO, the member is encouraged to choose from among a list of network physicians. Specialist are selected from either within or outside the network. If the member stays within the network, the co-payments and deductibles are small. If he/she goes outside the network, the rate of reimbursement decreases (Tibbits & Mauzano, 1984).

Point-of-Service (POS) Plan

The point-of-service (POS) health care plan is a relatively new addition to the list of managed care options. It includes components of the totally managed care provided by an HMO, plus some of the freedom of choice inherent in a PPO (Frieden & Traska, 1989, & McEarchen, 1991).

In a POS plan, the consumer is encouraged to seek medical care in a PPO network, with care controlled by a primary physician, but care may be obtained outside of the network at reduced coverage levels (McEarchen, 1991). The member may choose to work within the plan

structure, using the plan specialists to whom that doctor refers him/her. At any time, however, the member may choose to go outside the network. If the member uses the plan, he/she pays little, if anything. Copayments are small. Deductibles, if any, are limited. If the member goes outside the network, there are deductibles and large copayments (Tibbits & Mauzano, 1984).

Also known as open-ended HMOs or managed care networks; POS plans are a useful transition from traditional indemnity insurance to HMOs. They can ease consumers into managed care with minimal resistance (Frieden & Traska, 1989).

Differentiation of Terms

As managed care options have proliferated, the distinctions among them have begun to blur. However, POS plans typically differ from HMOs and PPOs in several fundamental ways. One of the most important has to do with freedom of choice. In an HMO, enrollees use member doctors for their primary care. If specialty care is required, a patient is referred by the "gatekeeper" physician to a specialist within the HMO. Under this scenario the out-of-pocket costs to the patient is minimal (Frieden & Traska, 1989).

POS plans are complicated and very difficult for

consumers to understand. It can take a large company as much as nine months to a year to implement a POS plan (Tibbits & Mauzano, 1984). Administration is also a potential source of difficulty. Since, consumers can use out-of-network providers, the claims process becomes more complicated (Tibbits & Mauzano, 1984). To overcome the potential weaknesses of a POS plan requires comprehensive planning. To minimize consumer confusion and resistance, education and open communications are critical (Tibbits & Mauzano, 1984).

Spectrum of Managed Care Plans

Generally, managed care plans are those which control costs and use of services. Theoretically, an HMO represents complete control (See Figure 2). A POS benefit plan such as a PPO or open-ended HMO, offers less control than a pure HMO, but it is an alternative to the lock-in aspect of HMOs.

UNMANAGED			MANAGED	
WEAK CONTROL			TIGHT CONTROL	

Fee	PPO	EPO	IPA	STAFF
For			HMO	HMO
Service				

Figure 2 Spectrum of Managed Care Plans

Key characteristics of the most effective managed care plans include the following (Fox and Heinen, 1987):

* The cost, use, and appropriateness of services rendered by network providers are tightly controlled. Providers are selected on the basis of their ability to provide cost-effective care.

Practice patterns are monitored, and specialist referrals are screened by the network's management. Some HMOs and POS plans set targets for how much use should occur in and out-of-network.

* Benefit design provisions encourage use of network benefits. In an HMO, benefits are restricted to HMO providers and approved emergency care. In a POS plan, network benefits generally parallel those of an HMO and require minimal cost sharing, while out-of-network benefits require cost sharing that is significant enough to encourage network use.

For example, coinsurance for out-of-network care may be set at 20 percent less than network benefits and large deductibles may apply (for example: \$500 or 1 % of pay).

* Utilization controls are placed on both in-network and out-of-network services. The controls may be more visible to the employee using out-of-network services.

HMOs, for example, manage utilization within their own organization and do not require an employee to call

for precertification or obtain a second opinion. An employee will still have to comply with traditional utilization review requirements for using out-of-network benefits.

* A gatekeeper physician controls access to the network and is paid on a capitated or discounted fee-for-service basis. The physician's compensation may be tied to goals of what percent of services are provided in-network for his or her patients.

DoD's Coordinated Care Program

To improve its health care delivery system, DoD has proposed the Coordinated Care Program (CCP) which is modeled along the approach of a triple option plan ("Defense Department," 1992). A health benefit plan that offers beneficiaries their choice of three health benefit alternatives, (1) a health maintenance organization (HMO), (2) a point of service, preferred provider organization (PPO), and (3) a traditional indemnity health benefits plan (traditional CHAMPUS) ("Defense Department," 1992). The DoD program guidance for a CCP was recently published in draft for medical facility commanders and others attending a senior executive conference on coordinated care. In addition, major DoD procurements in Washington/Oregon region and California/Hawaii include the CCP designs.

The goal of the DoD CCP is increased efficiency and cost-effectiveness of CHAMPUS health care and direct care services by delivering these services through established networks of quality civilian providers and hospitals, coordination between the military treatment facilities (MTFs) and these networks, and improving beneficiary services by providing more accessible care (Mendez, 1992).

CCP will enhance access for beneficiaries by developing a local delivery system or "network" of primary care managers for beneficiaries who chose to enroll in the HMO component of the CCP (CC-Plus). These networks will be based on cooperative arrangements between military and civilian health care providers and organizations.

CCP will improve and ensure quality by administering utilization management principles through the DoD Quality Management Program (QMP) and by stressing a leadership commitment to quality improvement, outcomes management, a supportive organizational culture, corporate responsibility, information support, education, and the evaluation of improvement activities (ASD(HA), 1992).

Costs will be controlled through the use of managed care techniques including design of benefits to

encourage eligible beneficiaries to use services prudently (see Appendix 1); establishment of provider network arrangements in which providers share in the cost of care risks and through utilization management methods designed to control inappropriate utilization of services. Special emphasis will be placed on health promotion, effective case management and discharge planning (ASD(HA), 1992).

To accomplish its goals, the CCP includes several integrated components which will improve the efficiency and cost effectiveness of the DoD health care system. The major components of the CCP include an enrollment program, improved benefits and cost sharing incentives for beneficiaries using the managed care aspects of CCP, a system of primary care providers as the centerpiece of health care networks, and improved utilization management and quality assurance programs (Mendez, 1991).

The cornerstone of the CCP will be the local provider networks based on arrangements between military medical treatment facilities (MTF) and civilian health care providers and organizations. These networks will be locally managed by MTF commanders who will be responsible for resource management and the delivery, cost, and quality of the

health care services provided to beneficiaries in the service areas (GAO, 1991).

One of the most important components of any managed care plan is the health care providers that make up the primary care network. They represent the primary contact that the beneficiary will have with the health care delivery system.

Enrollment Policy

Enrollment in coordinated care is only open to eligible beneficiaries who are registered with DEERS (Mendez, 1992). The enrollment process is designed to allow commanders to know the extent of their responsibility to beneficiaries within their respective catchment areas.

Enrollment in coordinated care is not mandatory except for active duty members who will be enrolled automatically. Active duty dependents will be given the option of enrolling in coordinated care. Retirees, retiree dependents, and eligible survivors will also be given the opportunity for enrollment only if a sufficient provider network capacity exists within the catchment area. Medicare-eligible beneficiaries may be enrolled in coordinated care and provided care at a military treatment facility if services are available. If services are not available, Medicare-eligible

beneficiaries will be referred to civilian health care providers who accept Medicare reimbursement (ASD(HA), 1992).

Space-available care and civilian care under CHAMPUS will be available to beneficiaries who are not offered the opportunity to enroll in coordinated care due to insufficient network capacity. CHAMPUS-eligible beneficiaries who decline enrollment in coordinated care will receive health care services at a military treatment facility and a space available basis (ASD(HA), 1992).

Enrollment will not be initiated until such time that a network of providers has been established and is available for the enrolling population. Enrollment should be phased in over a three year period to allow for smooth of network development and enrollment processing (Mendez, 1992 and "Defense Department," 1992). Dr. Mendez envisions 25% enrollment in the first year, 50% by the end of the second year and 100% by the end of the third year. According to DoD documents, enrollment will be phased in starting with active duty members and their eligible dependents, in the following order of priority (Mendez, 1992):

- Priority 1: All active duty military.
- Priority 2: Dependents of active duty military in the rank of E-4 and below.
- Priority 3: Dependents of active duty military in

- the rank of E-5 and above.
- Priority 4: Retirees and their dependents, and survivors (CHAMPUS eligible).
- Priority 5: Medicare-eligible beneficiaries.

As the network of providers is enlarged, enrollment may be offered, in order of priority, to retired military, dependents of retired military, and eligible survivors of active duty and retired personnel.

Incentives for enrollment include, minimal or reduced cost shares, no claims filing, no balance billing, provider directories, enhanced benefits, increased access, quality assurance of civilian providers and case management (ASD(HA), 1992).

The targets set for enrollment in the catchment area management (CAM) and CHAMPUS Reform Initiative (CRI) demonstration projects were as follows: Luke AFB/Williams AFB, 34% in 2 years; Bergstrom AFB, 26% in 2 years; and CRI, 20% in three years. The Luke/Williams CAM experienced an enrollment of 31% of their eligibles in 32 months.

Primary Care Network Development

This graduate management project (GMP) addresses the issue of primary care network development under DoD's CCP. One of the most important components of any managed care program is the health care providers that

make-up the primary care delivery network (Boland, 1991). The development of such a network must address; requirements for participating providers, adequate number and mix of providers, primary care availability, specialist availability, adequate delivery sites, emergency services, office wait times, appointment wait times, and handicapped accessibility (Boland, 1991).

The development of the primary care network should also address the five dimensions of access: (1) accommodation; the degree of fit (organization of resources), (2) accessibility; geography, location, and availability of transportation, (3) affordability; the cost of the medical care, (4) availability; volume of services versus volume of patient need, and (5) acceptability; the attitudes and characteristics of beneficiaries and providers (Penchansky & Thomas, 1991).

The network shall include sufficient numbers of providers to ensure adequate access to care for beneficiaries who decide to enroll based upon anticipated demand and utilization. Civilian providers shall augment MTF capabilities to ensure adequate primary care delivery sites to ensure the beneficiary's travel time routinely does not exceed 30 minutes (ASD(HA), 1992)

In order for the CCP to optimize its efficiency and effectiveness, the local provider networks should be evaluated on a regular basis. This evaluation should involve an assessment of reimbursement strategies, the extent of adverse selection among the internal network (MTFs) and external networks, and the stability of oversight mechanisms (Boland, 1991).

Statement of the Management Problem

As DoD enters into the realm of managed care, MTFs will be required to organize and develop networks of civilian hospitals, physicians, and other services to provide the full continuum of care covered by statutory law for their eligible beneficiaries. This will be a new adventure for most, if not all, commanders, administrators, and their staffs. Therefore, MTFs will have to rely on past experiences of the demonstration projects (catchment area management (CAM) and CHAMPUS Reform Initiative (CRI)), writings in the civilian literature, hire consultants, and/or contract with existing networks.

The first crucial step will be to identify requirements for the primary care network needed to provide high quality, cost-effective and accessible health care. The development of the primary care network is the cornerstone to the entire CCP. Without

a developed primary care network, enrollment cannot begin. If this component is not approached in an orderly fashion, utilizing a project management approach, the entire CCP could be jeopardized, resulting in inadequate support from the key stakeholders.

Literature Review

There are several major tasks when organizing a managed care system: (1) developing the provider network, (2) negotiating provider contracts, (3) establishing a sales (enrollment) and marketing organization, (4) developing a utilization management and quality assurance capability, (5) developing a management information system, and (6) establishing an organizational infrastructure (Boland, 1991).

Network Development

A successful managed care plan must develop a health delivery network with accessible primary care within all population areas, relevant to the plan (Lee, Goldstein, & Rodman, 1990). There are five critical steps in network planning: (1) identification of network goals and enrollment targets, (2) definition of the number of providers required, (3) development of initial quality screens, (4) demonstration of value to employers, and (5) reassessment of goals, targets, and

performance (Brady, 1993).

Identification of network goals should address the purpose of the plan and formation of the network. Market share goals and enrollment targets by specialty and geographic region should also be developed (Brady, 1993).

In order to define the appropriate number of providers, an assessment of market demand and analysis of provider supply in the local market should be accomplished. By comparing demand and supply of physicians, the need for additional providers is identified by specialty and geographic location (Brady, 1993).

Development of quality screens should not only address clinical quality, but also quality of services. Indicators should be established to monitor quality of service, such as: provider compliance with policies and procedures, claims turnaround, member satisfaction, provider satisfaction, and disenrollment trends. Appropriate credentialing procedures will help to ensure clinical quality is met and indicators to address clinical quality should be also developed. These indicators should include, but are limited to: inpatient utilization rates, compliance with treatment protocols, clinical indicators (e.g., infection and C-

section rate, etc.), LOS by diagnosis, and outcome measures (Brady, 1993).

Health care is a services business, first and foremost. People enrolling in an HMO are most often choosing a more convenient or less costly alternative to health care delivery, rather than a new provider (Lee, Goldstein, & Rodman, 1990).

The first step when developing a network of providers is to identifying the geographic coverage, types of specialties, and number of physicians needed. This can be accomplished through a comprehensive market analysis. Network development should be comprehensive and strive for a full continuum of managed care services. The network should include acute hospitals, as well as, physicians, outpatient care, psychiatric care, rehabilitation services, chemical dependency programs, prescription drugs, optometry services, dental care, and preventive care (Boland, 1991).

The market analysis will identify: what the needs are, and what care the MTFs can provide in-house versus what type of care you will need augmentation from civilian sources in the community. Furthermore, this thorough investigation should identify which hospitals, physicians, and ancillary organizations are currently providing CHAMPUS services.

A question frequently asked in regards to recruitment priorities is, "Who should be recruited first, the hospital or physician?" Normally, the hospital should be recruited first (Boland, 1991). "A physician without a hospital is like a fish out of water (Boland, 1991)." Arrangements with various support services that physicians will refer their patients to should also be pursued (e.g., lab, radiology, physical therapy, etc.). These services will either be performed in-house or they will be contracted out to various outpatient facilities.

Once a hospital has been targeted for inclusion in the network, the next step should be to pursue physicians who admit there (Boland, 1991). If the hospital has an Independent Physician's Association (IPA), this is the best place to start (Boland, 1991).

According to Kongstvedt (1989), without proper planning, the time line for normally developing a provider network will be substantially drawn out, and the provider network may not complement the hospitals in the network or meet beneficiary needs. He states that geographic need should be considered first and therefore certain hospitals should be targeted for inclusion in the network.

Network development will be affected by the

availability, acceptability, scope of practice, and practice capacities of the physicians in the service area (Kongstvedt, 1989).

Once the market needs have been determined then the identification of candidates to recruit into the network can begin. The first task will be to obtain a list of the physicians who have privileges at the hospitals in the network. Other means for identifying candidates is lists of physicians already in managed care programs (HMOs or PPOs), local county or state medical society/association, or from claims data (i.e., CHAMPUS, Medicare, or others) ("The Air Force," 1991, and Kongstvedt, 1989)).

In developing the provider network, there must be the right mix of physicians by primary care, specialty, and geographic distribution. When building the network, you should first identify your primary care requirements ("The Air Force," 1991, and Sinni, 1990).

Primary Care Manager

The local networks under CCP shall be based upon the primary care manager "gatekeeper" concept (Mendez, 1992). The gatekeeper is expected to provide basic preventive and routine outpatient services. The primary care manager can be a military provider, a civilian provider or group practice with whom enrolled

members will establish and maintain an ongoing affiliation for health care delivery (ASD(HA), 1992).

Conventional definitions of primary care include the following specialties: family practice, general internal medicine, general pediatrics, and non-physician practitioners (Sabatino, 1992 and Mendez, 1992). OB/GYN is usually considered specialty care. Some plans allow self-referral to OB/GYN physicians for certain treatments and procedures (Kongstvedt, 1989).

There are several opinions in the literature on what should be the ratio of primary care managers (PCM) to enrollees in a closed panel HMO. Kongstvedt (1989), states the ratio should be in the range of 1:1,400 to 1:1,700, while Fox & Heinen (1987), found a ratio of 1:2,000 in one successful HMO. Availability of high quality physicians will have an impact on the staffing ratios. A recent article in the Managed Health Care News, showed the staffing patterns for the largest group model HMOs in the U.S ("Top 25 Group," 1992). The staffing patterns ranged from a ratio of 1:1,878 to 1:517, with an average ratio of 1:1,339 (Appendix 2).

In an open panel primary care network, a limit on the number of empaneled beneficiaries per PCM should be established. This number will vary, depending on how many more patients the PCM can handle considering their

<u>Services Covered in Risk Arrangement</u>	<u>Minimum HMO Enrollment Level</u>
Primary care, excludes deliveries and ER (includes only basic medical services)	500
Primary care, includes deliveries, excludes ER (includes basic ancillary services)	1,500
Primary and secondary care, includes ER (includes ancillaries and specialty consultations, excludes hospitalization and surgery)	3,000
Primary and secondary care (includes surgeons' fees, excludes hospitalization)	5,000
Primary, secondary and tertiary care (includes hospitalization and all covered, medically necessary services)	10,000
SOURCE: MGM Journal, Jan/Feb 1991.	

Figure 3 Suggested Enrollment Levels for Capitated Primary Care Providers.

current patient workload. In the CAM demonstration project at Luke/Williams AFBs in Arizona, they started with a limit of 500 patients per PCM and this seemed to work well ("The Air Force," 1991). The limit can always be adjusted later, if warranted and productive. The initial limit should be established by a multi-disciplinary team to include the participating provider ("The Air Force," 1991).

Figure 3 shows suggested enrollment levels for providers to achieve within 12-18 months of

implementation of a capitated program. Minimum levels of enrollment are necessary to effectively spread risk assumed by the provider such that losses from a few patients will not result in a loss for the provider on his or her capitated group. This information is vital to know when negotiating with providers for a long term relationship. You do not want to make the relationship a looser for the provider.

Provider Selection Criteria

The physician/patient relationship is the starting point of the delivery system, therefore, primary care physicians become especially critical. Selecting physicians carefully in the beginning is much easier than getting rid of poor performers later (Kongstvedt, 1989). According to Fox & Heinen (1987), primary care physicians with active hospital practices should be selected over those without an active hospital practice. Those with active practices have been found to be more confident in their skills therefore, there are fewer referrals to specialists.

The provider selection team must determine the most desirable attributes of network providers prior to selection. These desirable attributes, which include: practice patterns, credentials, previous and current relationships with recognized medical associations, and

patient satisfaction, shall serve as the selection criteria for network providers.

As discussed by Kongstvedt (1989), physician practice patterns are a key factor in selection of providers for managed care plans. Practice pattern information can be obtained from data provided by the provider, medical associations, referral centers, OCHAMPUS (if provider is a CHAMPUS participating provider) and others, and can give indications as to the tendencies of the provider in factors such as: time spent per patient, frequency of return visits per patient, referral patterns, and patient complaints. These factors, if carefully weighed can be valuable when used to determine whether a particular potential candidate for network membership meets the criteria which the provider selection team deems appropriate.

Credentials of potential network providers are essential criteria which should be carefully evaluated by the Credentials Committee. Kongstvedt and Boland suggest that selection criteria should be developed and strictly adhered to and cover the following:

- * Training - location and type
- * In good standing professionally and either board certified or eligible for certification
- * Current state medical license without any restrictions or history of loss
- * DEA number
- * Hospital privileges - names of hospitals and scope of practice

- * Malpractice insurance - carrier, scope and currency
- * Malpractice history - pending claims, claim record
- * Record of CME
- * Office standards (i.e., # of exam rooms, adequate waiting room, et.)
- * Adequate office hours and 24 hour coverage
- * Proficiency in various specified procedures (such as minor surgery, etc.)
- * Ability to take on a specified number of enrolled patients and have an adequate scheduling policy

Potential participating providers (medical groups, IPAs, or individual Physicians) should complete an application, undergo a site visit and interview, and pass a quality assurance review (Boland, 1991). The application collects information on the licensure, specialties, board status, hospital privileges, and office hours. It should also require documentation to support the above plus malpractice insurance and procedures for handling after-hours calls and referrals to specialists (Fox & Heinen, 1987). A resume on each physician should accompany the application, references and information on the physical plant, such as total square footage and number of exam rooms.

During the site visit the following evaluations should be accomplished: office operations (record keeping and scheduling) and environment, parking and access, physical appearance, cleanliness, waiting area and signs. The committee should also conduct a medical

record review in addition to reviewing the provider's office characteristics such as the use of midlevel practitioners, in-office capabilities, provisions for emergency care, and back-up (Boland, 1991).

As part of the credentials investigation, the provider's relationship with professional associations such as the AMA and state and local medical organizations should be reviewed. This review is useful in determining acceptance of the provider under professional, social, and personal criteria which may affect the ultimate relationship of the provider with Wilford Hall and its beneficiaries (Boland, 1991).

A survey of patients treated by the provider could be accomplished in the effort to determine the quality of relationships that the provider maintains with their patients. This survey could consist of a simple questionnaire or a telephone survey of a random sample of patients in order to get a feel for the provider's ability to satisfy patients. The results of this survey would be helpful in ensuring the CCP plan maintains a reputation for providing the best service for its beneficiaries (Fox & Heinen, 1987).

Payment Alternatives

Compensation is an integral part of good relations with physicians. A major decision to be made in

developing the managed care network is selecting the basis for reimbursement or payment. According to Fox & Heinen (1987), successful plans do not use a particular set of incentives, but have developed the appropriate mix of approaches to cost containment. The financial incentives and methods of utilization control are developed jointly. They further state, a major factor in the overall success of HMO's is the willingness of providers to accept some degree of financial risk.

Physician participation in the coordinated care program is of extreme importance from marketing and financial viewpoints. Physician fee determination is an integral feature of marketing the network to physicians, because they will be concerned with maintaining their current revenue levels under the target income hypothesis of medical economics (Sachs, Bonney & Blumberg, 1988).

Possible reimbursement methods include billed charges (fee-for-service), discounted billed charges, negotiated fee schedules, and capitation. Figure 4 shows several payment options for physicians. This figure details data requirements for setting initial prices and for ongoing monitoring purposes. Payment methods are listed in ascending order from the least to greatest provider risk (Schroer, Penn, & Rahn, 1987).

<u>Physician Payment Methods</u>	<u>Pricing And Monitoring Data Needed</u>	
	<u>Pricing*</u>	<u>Monitoring+</u>
Standard Charges	1,3	1,2,3
Discounted Charges	1,3	1,2,3
UCR by Procedure	1,3	1,2,3
Fixed-fee Schedule	1,3,4	1,2,3
Fixed-fee Schedule or UCR with Performance Bonus	1,2,3,4	1,2,3,4
Capitation	2	4

*Key to pricing data needed:		
1. Current fee or charge schedules by procedure or service.		
2. Actuarial forecast of expected plan costs and utilization rates.		
3. Frequency tables of prevailing fees by procedure.		
4. Development of relative value scale.		
+Key to monitoring data needed:		
1. Periodic claims audit of fees charged.		
2. Utilization evaluation data.		
3. Periodic audit to evaluate service frequency by diagnosis or principal procedure.		
4. Evaluation of utilization patterns against actuarial forecast.		

Figure 4 Provider Payment Options for Provider Contracts.

Billed charges are the same as the traditional fee-for-service. Rates are usually subject to annual review. However, the provider may be raising charges throughout the year (Schroer, Penn, & Rahn, 1987).

Discount charges or usual, customary, and

reasonable (UCR) payment systems are the easiest approach, and require no changes in provider behavior, billing, or claims administration. However, this method of payment is weak from a cost containment perspective, since there is non incentives to use resources more efficiently (Sachs, Bonney & Blumberg, 1988). This type of payment system is common under the PPO concept (Schroer, Penn, & Rahn, 1987). Rate is subject to annual review and negotiation.

Fixed fee schedules promote equality in payment among physicians for providing the same service, but do not provide incentives for improving efficiency (Sachs, Bonney & Blumberg, 1988). Fixed fee schedules is prospectively negotiated fee structure on a service schedule. It is difficult to set the fee schedule appropriately and achieve necessary cost savings (Schroer, Penn, & Rahn, 1987).

Under capitation the provider receives a set payment per individual enrolled regardless of how often the patient uses their services. The provider is at risk for patient utilization. Capitation payments promote minimization of the total cost of care, but could also provide an incentive for under treatment and reduced access (Sachs, Bonney & Blumberg, 1988). The critics have suggested there are several problems with

a capitation system: (1) most plans put physicians at risk and not really help them manage the risk, (2) most PCMs have little idea about how to manage health care within capitated limits, they want and need help, and (3) simply capitating physicians will not lead to change in practice patterns (Lee, Goldstein & Rodman, 1990).

Each of the different forms of payment creates certain incentives for providers, and therefore must be accompanied with appropriate utilization controls (Higgins, 1988 and Schroeder, Atkinson, & Armstrong, 1992). For example, paying billed charges requires monitoring of the number of services provided per patient, while paying discounted charges or fixed fee requires monitoring number of visits per patient and return visits (churning).

Risk-sharing arrangements spread financial risk among the managed care plan, beneficiary, and provider. The purpose of negotiating risk agreements is to place all parties at some level of financial risk for the cost of delivered services. Reimbursement for network providers needs to be at a level that would consistently produce savings, without being so low it would only attract marginal providers ("The Air Force," 1991). Management should understand the consequences

of the different reimbursement alternatives and risk-sharing (Schroer, Penn, & Ahern, 1987).

Risks can also be shared through the use of risk pools managed by the managed care plan. Risk pools can be established for many different reasons.

Capitated pools for referral services and institutional services are established by setting aside a capitated rate per member per month. Referral and institutional services are paid directly from this fund.

Another risk pool is the withhold and risk/bonus arrangement. This is established by withholding a percentage of the prepaid per member rate. Payment of excess expenses from the referral or institutional services pool are paid from the withhold fund (Kongstvedt, 1989). This withhold pool is distributed at the end of the contract period based upon the cost-effectiveness of the providers.

The cost of health care has two basic components. They are the unit price of services and the utilization of services. PPOs have traditionally focused on the unit price of services. This focus has been unsuccessful because PPOs have done little to control the utilization of services. If one saves money on a duplicate or unnecessary service, has one really saved

any money? Through provider capitation, HMOs have been more successful in monitoring the unit price and utilization of services (Schroeder, Atkinson, and Armstrong, 1992).

Primary Care Providers

A risk-sharing arrangement with primary care providers is desirable for utilization control (Kouba, 1991). Under an at risk agreement, the PCM agrees to provide all defined services required by the member for a fixed, prepaid per member rate (Kouba, 1991). Furthermore, the PCM could also incur risk for secondary and/or tertiary care services through the use of a capitated risk pool (Kouba, 1991).

Quality Assurance

Quality assurance or quality management should be seen as a selling point for utilizing network providers, as opposed to remaining with traditional CHAMPUS. Beneficiaries do not realize the potential risk in choosing one's provider from the Yellow Pages and will therefore need to be educated as part of the marketing program. Assuming that providers with licenses are all the same is a false and dangerous assumption. When a beneficiary leaves the military medical system for a civilian provider not in the program's network, they lose the protection that the

military quality assurance program provides (Upton, 1992).

Kongstvedt (1989) claims that a managed care's ethical obligation to insure quality goes beyond the traditional "do no harm." It is the responsibility of the managed care plan to ensure all of its network providers have current and valid licenses. As managed care restricts freedom of choice for its enrolled members, the obligation to insure quality providers is paramount. Kongstvedt advises separate quality assurance functions. These functions consist of credentialing, peer review, member complaint reviews, and inpatient reviews.

The purpose of a quality assurance program, according to Kongstvedt (1989), is to detect patterns of substandard care that may have detrimental effects on an individual's health. Important components of an effective managed care quality assurance program are: credentialing, medical care evaluations, peer review and review of client's complaints.

The National Committee for Quality Assurance Standards for Accreditation has specific standards that cover a number of areas in quality assurance to include: credentialing, member's rights and responsibilities, preventive health services, and

medical records. The requirements for the credentialing of professionals include all individuals that are affiliated with managed care organizations. These standards should be incorporated into existing credentialing and privileging procedures.

Utilization Management

The Institute of Medicine defines utilization management as a set of techniques used by or on behalf of purchasers of health care benefits to manage health care costs by influencing patient care decision making through case by case assessments of the appropriateness of care prior to its provision (Tischler, 1990).

Managed care means monitoring the delivery of health care in all delivery systems and at all delivery sites. One of the goals of managed care is to improve the efficiency of the delivery of care without having a negative impact on the quality of care provided (Becker, 1990).

Managed care should improve the quality of care by reducing the use of unnecessary services but should not reduce the quality of patient-provider relationships (Becker, 1990). Prevent the service from being ordered or at least select a service that is cost efficient.

Utilization management is the ongoing evaluation

of medical resource allocation and utilization. It involves the assessment, monitoring, and control of appropriateness with regard to the provider, level of care received, correct equipment, supplies, and ancillary staff (Eason, 1990). The major components of utilization management include utilization review, discharge planning, and case management (Tischler, 1990).

Utilization Review

Utilization review monitors and evaluates the utilization of services provided to ensure the services are necessary and appropriate. UR should not only be used to monitor poor results but also to focus on educational opportunities for all physicians in the network. Levick (1988) estimated that the number of inappropriate or unnecessary medical procedures in the United States ranges anywhere from 10% to 60%. Intrinsic to this process is precertification, concurrent review, and retrospective review of inpatient and outpatient services.

Preadmission Review (Precertification)

Prospective or pre-admission review is the evaluation of care before it is provided to determine medical necessity and the most cost effective method of delivery (Kibbee & Spath, 1987). Kongstvedt (1989)

discusses prospective management or prior/preadmission authorization in terms of appropriateness of the inpatient mode as the means of providing care. This step involves an eligibility verification and a review of services before services are rendered. In managed care, the emphasis is on outpatient care as the less-costly, more efficient means of delivering care.

At the core of the CCP is the primary care manager. It is the primary care provider that is "responsible" for ensuring that the patient receives the most appropriate care in the correct setting. This will require the primary care manager to act as the gatekeeper, in conjunction with the Health Care Finders.

Preadmission authorization does not guarantee payment by itself. The inpatient treatment will have to follow established protocols and be subject to concurrent review. Preauthorization is the component of UM that produces the most immediate cost efficiency by eliminating unnecessary care and ensuring appropriateness of care (Armstrong, 1992).

Concurrent Review

Concurrent review is the review of inpatient hospitalization to assure that it remains the most appropriate setting for the care being rendered

(Snyder, 1989). It is designed to reduce the length or amount of services provided (Wickizer, Wheeler & Feldstein, 1989). This step in the utilization review process occurs after the beneficiary has been approved and admitted for inpatient care. The object is to monitor the inpatient treatment in accordance with accepted standards of care. The utilization management reviewer evaluates the medical necessity, appropriateness and quality of medical services provided (Kibbee & Spath, 1987). This review process is usually initiated and accomplished by registered nurses either by phone or chart audit. If there is disagreement between the reviewer and the beneficiary's physician, a pre-selected physician advisor is contacted to review the information and make a final decision.

Retrospective Review

Retrospective management is a financial check insuring providers bill for the services they truly provided. It is a review of services after the services are rendered. This analysis will include an evaluation of referrals, non-availability statements, use of ancillary services and supplies, and any access to care issues.

Fox and Heinen (1987) describe effective

utilization management and quality assurance programs that contributed to the overall success of four health maintenance organizations. They found retrospective analysis of physicians utilization patterns, prompt feedback to the physicians on their patterns, and departmental review of the physician's profiles were effective methods utilized in changing physician behaviors.

Retrospective review is sometimes used in conjunction with preauthorization to verify accuracy of precertification procedures and protocols. Likewise, retrospective review is used to confirm trends identified during concurrent review. This step in the utilization management process will have the ability to deny payments after the service has been performed, if providers within the plan do not follow appropriate protocol, such as preadmission review (Kongstvedt, 1989).

Discharge Planning

Discharge planning (DP) assesses the medical needs of a patient's after hospitalization; to effect timely and appropriate discharge. DP should be an integral part of every hospitalized patient's care. DP should begin at preauthorization or immediately following admission (Kongstvedt, 1989).

The utilization review nurses, in conjunction with the attending physicians, social workers, and the primary care managers will work with the patients and their families to achieve discharge at the earliest medically feasible date.

There are many advantages of DP: (1) minimizes the possibility of readmission by having adequate services and support in place at the time of discharge, and (2) minimizes length of stay by not keeping the patient in an inpatient status, while waiting for post-discharge services.

Case Management

Case Management is "an organized to identify patients who have the potential to be high cost, long stay, and/or complicated discharge planning cases as early as possible; to locate and assess medically appropriate alternative settings for these patients; and to manage their health care benefits as cost effectively as possible (Armstrong, 1992)."

Case management focuses on high dollar cases, usually in the form of catastrophic or chronic illnesses. Berensen (1985) identified that a small number of patients are responsible for a majority of the health care costs. This final step in the utilization management process identifies program destroying cases, insuring all economical practices are followed. "Effective case management results in patients receiving care in the least costly setting

without compromising quality (Kenkel, 1990)."

The goal of utilization management is to insure cost effective, quality care. The concern is to insure that this component of the managed care initiative does not lead the CCP plan to financial strains in its infancy. As the military treatment facilities become more experienced in managed care, utilization management will grow with the program. These relatively simple, initial steps are a substantial improvement from the current system of simply validating non-availability statements. Utilization review and quality assurance are of extreme importance to the success of a managed care plan. According to Fox & Heinen (1987), successful managed care plans include the following components: (1) reducing unnecessary inpatient and ancillary service utilization; (2) reducing utilization of expensive providers; and (3) shifting utilization to less expensive care options.

Integrating QA and UM

While UM and QA are interrelated, they are also distinctively different. UM is necessary to ensure that medical resources are utilized appropriately. QA, on the other hand, is not concerned with appropriateness of care, but instead, focuses on

whether the care provided meets the highest quality standards. Because the two programs require a considerable amount of energy and may potentially conflict with each other, they should be separate (but highly interactive) departments (Kongstvedt, 1989). In fact, the UM and QA departments will work closely together to ensure that data collection is not duplicated and may be utilized by both departments.

Purpose

The purpose of this graduate management project is to devise and recommend a methodology for developing the primary care network under DoD's Coordinated Care Program based upon the latest literature as well as input from civilian experiences and military experiences under DoD demonstration projects, such as; CAM and CRI. This methodology will then be implemented using the San Antonio Service Area (SASA) as the pilot.

CHAPTER 2

METHOD AND PROCEDURES

Selecting a provider network requires careful planning. In the development of the health services delivery network for a managed care program, one must seek to include the needed medical service providers, such as physicians and other hospitals. This process is a major corporate success building block, and selecting participants in the network must be done carefully. Selected appropriately, all participants can benefit. Selected incorrectly, long delays, excessive compromising, and failure is almost certain.

The development of a successful managed care program is contingent upon a thorough and comprehensive analysis of the market. Several factors should be considered: geographic locations of the providers, travel time from population centers to providers, accessibility to services, affordability of services, community attitudes, and capabilities of area MTFs. Provider network development and CHAMPUS recapture strategies should be based in part on a thorough examination of the direct care and local civilian medical care system capabilities. A thorough analysis of the service area's population and demographics is essential to the development of enrollment and

utilization projections in the different benefit options under CCP.

Civilian Health Care Environmental Assessment

The first steps in developing a provider network under DoD's CCP is to accomplish a service area market analysis and civilian health care environmental assessment (Boland, 1991). The civilian health care environmental assessment can be obtained from the local hospital council or through the state hospital association. This analysis is intended to assist in optimizing direct care system capacity and medical services necessary to support the health care needs of the service area and referral populations.

Catchment Area or Service Area Profile

This analysis is intended to assist in optimizing direct care system capacity and medical services necessary to support the health care needs of the catchment/service area and referral populations. Provider network development should be based on a thorough examination of the direct and indirect care system capacities.

This analysis will include a review of the geographic and demographic market size and characteristics as well as the projected utilization of services based upon the known/expected population

served and expected service use rates based on the CCP health benefits design and historical data (Grems, 1991). It should include a review of care provided in the military medical treatment facilities, and CHAMPUS workload and expenditures in the catchment/service area.

Geographic market size and characteristics will be analyzed utilizing demographics, discharges, outpatient services, and CHAMPUS utilization by zip code. A patient origin analysis should be accomplished to obtain an understanding of geographic draw rates and their affect on market size. This will be useful in sizing the primary care network and computing capitated or other reimbursement methodologies to fund direct care operations ("Concept of Operations," 1992). Available data will be used to match beneficiaries and CHAMPUS expenditures to specific zip codes within the SASA. Specific primary care physicians and their CHAMPUS billings by zip code will also be identified. This analysis will assist in identifying external providers who are presently being used by the SASA population as candidates for the primary care network.

The demographic data for eligible beneficiaries will be determined by extracting information from the Defense Enrollment Eligibility Reporting System (DEERS)

data and the Resource Analysis and Planning System (RAPS). This data will then be stratified by age, sex and beneficiary category.

RAPS, which is a planning tool, takes data in the DEERS data base and manipulates it based upon the requestors inputs and stipulations. When there are two or more MTFs which have overlapping catchment areas, like the San Antonio Service Area, RAPS will separate beneficiaries into zip codes and assign them to a MTF based on rules established by the OASD(HA). RAPS allows for the overlap and does not double count individuals in the population assignment to a MTF catchment area. RAPS provides geographic-specific projections of beneficiary populations for up to 10 years. Also, based upon analysis of factors associated with the use of clinical services, RAPS projects changes in utilization for the MTF.

The DEERS data base provides population statistics for catchment areas using rules established in RAPS. DEERS demographics reports provide a detailed breakout by zip code of where eligible beneficiaries reside. This is important when considering where to locate your managed care network providers. Plotting beneficiaries on a map is useful visual product to aid in your analysis.

Direct Care System Assessment

The first point of business in a hospital sponsored managed care network is an internal evaluation. An internal assessment should be accomplished to determine the capabilities of the direct care system and to understand any operational conflicts that exist. In addition, the internal assessment will identify clinical and service areas where network development is necessary.

The internal assessment should include the following:

- * Primary and secondary service area and market share;
- * Scope of services;
- * Facility location and location of other service units;
- * Average cost of service;
- * Inpatient and outpatient visits by clinical and service area; and
- * Facility condition/staffing and ability to enhance services.

Correspondingly, a physician evaluation should be conducted. Physicians are important to the hospital now, and a managed care program will not reduce this dependence but should enhance the working relationship.

The physician evaluation should include the following:

- * Number of physicians by specialty, such as family practice, internal medicine, and pediatrics.
- * location of physicians;
- * Inpatient and outpatient visits, and service utilization by physician; and
- * Level of support for development of a managed

care program (difficult to determine and accomplish).

In-Direct Care System Assessment

This analysis is concerned with gathering as much information as you can about the local health care market. You should become a local expert on the types, location, and quality of locally-available health care. The external assessment should include at a minimum the following:

- * CHAMPUS workload (Top 25-50 CPT Codes);
- * CHAMPUS expenditures;
- * CHAMPUS providers by specialty;
- * Health care finder list by specialty;
- * Provider availability to meet network requirements.

The external analysis should identify any opportunities for cost containment, increased access, and enhanced quality efforts. The assessment should also reveal any possible threats that might impede such efforts.

To complete the service area assessment, a analysis of available managed care programs in the catchment area (i.e., HMO or PPO) should be conducted. This includes hospitals, physician, group practices, insurance plans, operative HMOs and PPOs.

Unfortunately, there is insufficient data available to do profiling of civilian physicians. HQ

AFMSA/SGSIC has developed the Financial Analysis and Support System (FASS) which provide some detail on CHAMPUS participating providers. This information source will identify who the participating physicians are, where they are located, and what we actually know about them in regards to CHAMPUS workload. The following sources should provide adequate information:

- * Health Care Finder list
- * Military Professional Staff Input
- * Yellow Pages
- * Local Medical Societies
- * CHAMPUS Billing History

Management Information Sources

The data used for this analysis will come from internal management information sources such as Automated Quality of Care Evaluation Support System (AQCESS) (for patient draw rate analysis), the Medical Expense Reporting System (MEPRS), and Retrospective Case Mix Analysis System (RCMAS). External management information sources will also be utilized, such as MEPRS, from other San Antonio DoD MTFs, Financial Analysis and Support System (FASS), and Defense Medical Information System (DMIS). DMIS data will reflect facility and San Antonio Service Area demographics. RCMAS will provide for incidence rate and historical case mix data for Wilford Hall Medical Center (WHMC), Brooke Army Medical Center (BAMC) and CHAMPUS. CHAMPUS

workload, expenditures, participating hospitals and provider lists will be obtained from standard CHAMPUS reports and the FASS.

Network Development

The foundation of the DoD CCP is the primary care manager (PCM) function, which provides all the primary care for enrolled members, controls specialty referrals and insures appropriate inpatient/outpatient care is provided (GAO, 1991). Kongstvedt, (1989) stated the most common ratio for staffing a closed panel HMO gatekeeper function is 1 primary care provider (PCP) per 1,600 members. These PCMs must be appropriately distributed among the five primary care specialty areas: 1) Family Practice, 2) Internal Medicine, 3) Primary Care, 4) Pediatrics, and 5) Flight Medicine. When applying the above ratio to the age segmented SASA population, a rough estimate of the number of PCMs needed to service the empaneled beneficiaries can be determined.

Before participants are selected, it is necessary to know what would constitute a successful provider network and whether the financial incentives to bring those providers together exist.

Once the numbers and specialties of the needed providers are identified, the development and

selection process can take place. The potential providers of the catchment area can be identified by the following:

- * Obtaining a list from the county or state medical society.
- * Obtaining a list of providers who have provided services for CHAMPUS.
- * Consulting the yellow pages.
- * Surveying your current medical staff for referrals.

Once the providers are identified then the process of developing a communication network begins. Direct mailing of letters and working through the local medical society will help provide information to the targeted providers. The mailing must be thorough enough so that all providers who have an interest are given a chance to bid on the contract(s) or enter into an agreement.

All providers responding to the mailing should be aware of any requirements demanded. The provider will be able to perform the following:

- * Meet all credentialing requirements.
- * Meet all timeframe requirements for appointments and availability.
- * Provide equal access for physically challenged individuals in the office/practice location.
- * Provide access to all beneficiaries' records to monitor quality and utilization.
- * Shall present evidence of an independent ongoing quality assurance program.
- * Maintain qualifications for credential renewal every two years.
- * Have a well maintained facility with consideration for patient comfort and privacy.
- * Provide an ancillary staff trained and/or

certified in accordance with appropriate regulation.

- * Provides a continuing education program for the ancillary staff.
- * Must participate in Medicare.

CHAPTER 3

RESULTS

Implementation in the San Antonio Service Area

San Antonio Environmental Assessment

This information was extracted from a report
by the Texas Hospital Association.

The greater San Antonio (Alamo) area falls within the Texas Hospital Associations Division 8B (Appendix 3). When this health services area is analyzed, it is frequently benchmarked for the purpose of comparison, against Division 5A (Dallas/Ft. Worth), Division 4B (Houston), and the entire state (THA, 1992). Data from these areas provide benchmarks and allow comparisons that suggest areas of strength and weakness that can be used in strategy development. Selected highlights of this report are summarized below.

Population

Demographic characteristics such as total population, ethnic mix and per capita income set San Antonio apart from Houston and Dallas/Ft Worth and the entire state. The Alamo area has a total population of 1.6 million and accounts for 9.6% of the state's 17.0 million population. San Antonio has the highest percentage of people 65 years and older. The percentage of Hispanics in the Alamo area is two times

higher than Texas overall and Houston, and four times higher than the Dallas/Ft worth area.

Economy

The Texas economy has been stagnant over the past year. The San Antonio metropolitan area has fared better than other areas. Service sectors dominate the Texas economy and they are expected to expand over the next 20 years. This is especially true in the San Antonio metropolitan area where the economy is affected by tourism and conventions and the presence of five military bases. During the fiscal year 1990, the total economic impact of the five military bases was \$3.7 billion. In 1991, per capita income for the San Antonio area was lower than the Houston and Dallas/Ft Worth areas. San Antonio's largest employers include several health care related organizations: University of Texas Health Science Center, Bexar County Hospital District, Brooke Army Medical Center, Wilford Hall USAF Medical Center, Audie Murphy Memorial Veteran's Hospital, Baptist Hospital System, Southwest Methodist Hospital and Santa Rosa Health Care Corporation.

Hospital Demographics

San Antonio area is less than half the size of Houston and Dallas/Ft Worth in terms of hospitals and beds, but the ratios hospitals per 1000 people and

hospital beds per 100 people are about the same. When comparing numbers of beds, total admissions, total revenue, and number of FTEs among the three divisions, constant ratios emerge. These ratios show that Houston and Dallas/Ft Worth are roughly twice the size of San Antonio. Compared to Houston and Dallas/Ft Worth, San Antonio has:

- * almost 3 to 4 times more Alcohol/Chemical Dependency hospitals.
- * fewer investor-owned hospitals and a greater percentage of government-owned hospitals.
- * a greater percentage of rural hospitals.
- * a proportionately much higher volume of outpatient visits, while having a proportionately smaller numbers of outpatient surgeries.
- * a higher length of stay (7.64 days vs 5A's 6.03 days).
- * high numbers of geriatric services, outpatient services, certified trauma centers, various radiation therapy services, and tissue transplant services.
- * significantly lower revenue per bed.
- * rate of uncompensated care is higher than the statewide rate.
- * Managed care has a significantly smaller presence in San Antonio.

Social/Political Environment

The large hispanic and military populations in San Antonio create two important issues: trauma care and access to care.

Trauma Care

Few areas in the United States possess a trauma system like San Antonio's. In San Antonio, the military medical centers are used as level I trauma

centers. Lack of reimbursement for the military hospitals and problems with the coordination of patient transfers affect both the military facility's financial viability and the trauma center's ICU bed availability for DoD beneficiaries.

Community hospitals have experienced problems with coordination of transfers of critically ill patients to trauma centers in San Antonio because of lack of beds. Trauma centers are also having problems transferring stabilized patients to community hospitals. The trauma center's ICU beds then become full and they are unable to accept other patients.

Access to Care

San Antonio's problems with access to health care could be linked to the area's demographics. Texas has the second highest percentage of uninsured in the nation. In Texas, an estimated 35% of the hispanic population are without health insurance, 48.4% of San Antonio's population is hispanic. Service sectors account for 86.9% of non-farm employment in San Antonio. In the state of Texas the percentage of uninsured service sector employees is 23%, the highest in the nation. The national average is 15%. San Antonio has a lower per capita income than Houston and Dallas/Ft Worth. These demographic and economic

factors predispose the area to unequal access. There is community perception that the south side of San Antonio is medically under-served. Much of the local health care debate is focused on the issue of access.

Managed Care

Managed care plans, both HMO and PPO, have a significantly smaller presence in the San Antonio area than in Houston and Dallas/Ft Worth areas. HMO penetration in San Antonio is less than half the penetration rates seen in the other metropolitan areas (Appendix 4).

San Antonio is not currently a managed care "friendly city". Health care leaders familiar with local medical market speculate that several factors combine to explain the lack of managed care market penetration. The most significant contributing factor appears to be related to the somewhat nomadic relationship local providers have with area hospitals. Many local physicians maintain multiple office's, generally have privileges at several institutions, and do not necessarily maintain strong affiliations with a particular hospital. A history of strong physician autonomy and the ability to direct patients to competing institutions has greatly affected the provider contracting and utilization management

strategies employed by managed care companies. The recent experience of the Humana Corporation hospitals in San Antonio lends insight into the degree of control local providers have on hospital volume and subsequent revenue. The providers were not happy with policies and actions of the Humana System and proceeded to admit their patients in other community hospitals. This action almost destroyed the Humana hospitals in San Antonio.

San Antonio Service Area Environmental Assessment

A comprehensive profile of the MHSS in the SASA was accomplished by Vector Research, Inc., under DoD contract number MDA903-88-C-0147. This information was extracted from the Vector Research report titled San Antonio Service Area Profile and other data sources.

Beneficiary Access to Care

Overall utilization is fairly evenly distributed between BAMC and WHMC. Active duty utilization is more often provided by WHMC, as is utilization by Air Force affiliated beneficiaries. The majority of outpatient care for all non-active duty beneficiaries is provided by BAMC.

Examination of outpatient visits shows that overall outpatient utilization is fairly evenly divided between the two medical centers. There is, however, a

significant preference according to beneficiary type: 65% of active duty visit are provided by WHMC and its clinics, while the majority of visits for all other beneficiaries is provided by BAMC. Closer examination of visit data shows the distribution of outpatient workload by MTF Service branch almost exactly matches the population distribution by sponsor Service branch.

BAMC appears to serve mostly nearby beneficiaries from the area surrounding Fort Sam Houston, northeast of downtown San Antonio. BAMC serves very few beneficiaries residing farther than 20 miles away and virtually no beneficiaries from the area close to WHMC.

WHMC primarily serves beneficiaries residing near the four Air Force bases. While most WHMC patients reside west of I-10, significant portions reside throughout the San Antonio area.

In the SASA roughly 70% of beneficiaries travel ten miles or less to receive medical care and over 90% travel less than 20 miles.

Geographic Service Area

The geographic service area has been defined by CHAMPUS as a 40-mile radius around hospitals known as inpatient catchment area. The SASA is comprised of 40-mile circles around the two inpatient MTFs covering an area roughly 50 miles square and containing

approximately 173,000 DoD beneficiaries.

Patients migrate between the DoD MTFs as well as the direct (MTF) and indirect (CHAMPUS) care systems. Approximately 30% of the workload of the two medical centers originates outside of the service area through the aeromedical evacuation system. Additionally, the impact of **Specialized Treatment Services (STS)** designation will subsequently blur the geographic service area boundaries further. Since the two medical centers are regional and world wide referral centers, there are in effect "multiple geographic markets". The primary geographic market is the SASA from which to begin enrollment. The secondary market is made of the referrals from both regional and world wide catchment areas.

Population Characteristics

Population estimates for the SASA range from 172,000 to 185,000 depending on the source of the data. RAPS estimates the SASA population at 173,000, while the DEERS data base shows a population of 185,000. The DEERS data file represents an actual count by zip code at a specified time frame, while RAPS is a projection based upon a base year from DEERS data and are projected based on total service Program Objective Memorandum (POM) active duty end strength projections,

and service specific growth rates of paid retirees reported by the Office of DoD Actuary adjusted for regional migration patterns computed from historical DEERS data.

Service Area Demographics

Using the RAPS Model FY90 baseline population estimates the SASA contains approximately 172,180 beneficiaries (Appendix 4).

Children and

adolescents (ages 0-17) comprise 23% of the population. While, beneficiaries between the ages of 18-44 and 45-65 years make up 38% and 26%, respectively. The over 65 (MEDICARE eligible beneficiaries) constitute the remaining 13% (Figure 5).

Active duty members make up 17% of the beneficiary population. Retirees constitute 21% of the population. Active duty dependents comprise 28%, while dependents of retirees encompass 28% of the beneficiary population. The remaining 6% is made up of medically eligible National Guard and/or Reserve Members and

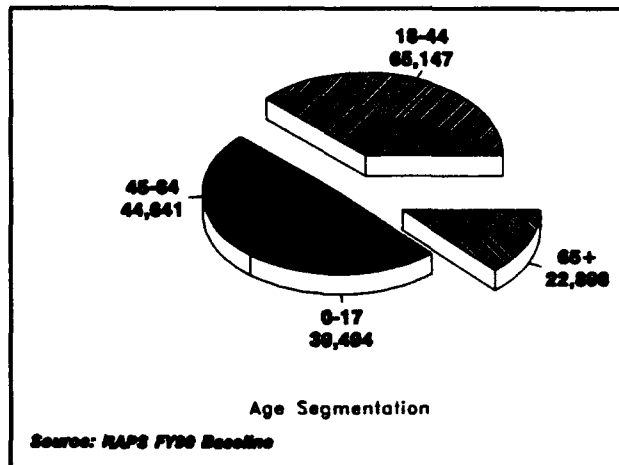


Figure 5 SASA Demographics

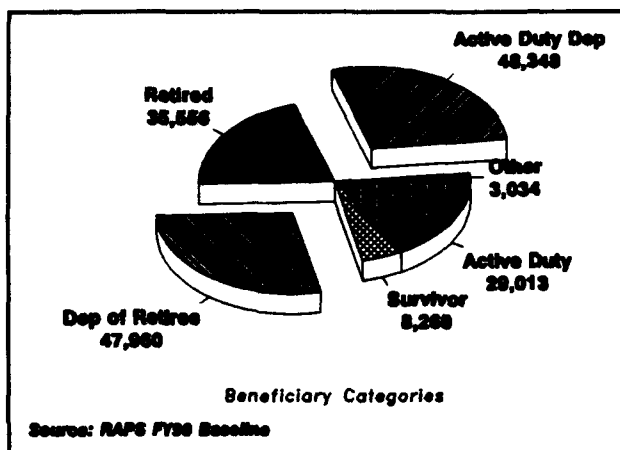


Figure 6 SASA Demographics

their dependents,
and survivors
(Figure 6).

The service
area population
consists of 62% Air
Force sponsors and
their dependents,
while the Army

accounts for 32% of the population. Together, they
constitute 94% of the entire service area population
(Figure 7).

The total CHAMPUS eligible population of the SASA
is approximately 120,269 or 70% of the medically
eligible population. The MEDICARE eligible population
constitutes about 13% or 22,898 beneficiaries.

Population demographics, by age/sex/beneficiary
and by sponsor Service/beneficiary, for the SASA are
provided at appendix 5.

Proximity of Beneficiaries to Service Area MTFs

The San Antonio Service Area is comprised of two
overlapping 40-mile circles around Brooke Army Medical
Center and Wilford Hall Medical Center, covering an
area roughly 50 miles square and containing 173,000
medically-eligible DoD beneficiaries. The two

facilities are about 12 miles apart.

Several medical clinics and ambulatory care facilities are also located within the SASA. These include clinics at Fort Sam

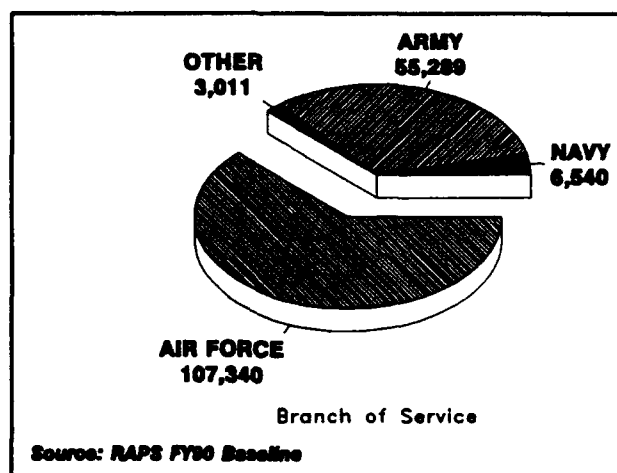


Figure 7 SASA Demographics

Houston (Army), and clinics at Lackland AFB, Kelly AFB, Randolph AFB, and Brooks AFB (Air Force) (Appendix 6).

The beneficiaries are unevenly distributed throughout the service area, concentrated primarily within the urban area of San Antonio. Almost all of the beneficiaries are located within 40 miles of both hospitals (Appendix 7 and 8).

WHMC and BAMC share approximately 85% of San Antonio zip codes in relation to San Antonio area zip codes (Appendix 9). The entire Randolph AFB area and northeast San Antonio are allocated to the BAMC catchment area (35% of beneficiaries in the BAMC catchment area have Air Force sponsors).

Active duty beneficiaries are distributed to zip codes in the DEERS data base based on work duty address. Therefore, active duty members and their

dependents were redistributed based upon the distribution of retirees and their dependents (Appendix 10-12).

There are pronounced differences in the population distribution depending on sponsor Service branch. Army beneficiaries generally live in the northeast, near Fort Sam Houston, with additional numbers residing in the city of San Antonio. Air Force beneficiaries are concentrated around the four Air Force bases (Appendix 13-15).

As the two medical centers are about 12 miles apart, the 20-mile and 40-mile circles overlap extensively so catchment areas do not reflect the population in proximity to MTFs. Almost all (99%) of the beneficiaries in the service area are within 40 miles of the two medical centers, and over 80% are within 20 miles of both (Appendix 16).

Utilization Patterns for SASA Beneficiaries.

Direct care utilization is fairly evenly distributed between BAMC and WHMC, which provide 47% and 53% of total discharges, respectively. WHMC provides roughly 60 % more care to active duty and their dependents, whereas BAMC provides more care to retirees, their dependents, and survivors.

Direct Care and CHAMPUS Referral Patterns.

There is a very small amount of CHAMPUS care in the SASA. The relative proportion of recoverable CHAMPUS (CHAMPUS requiring an NAS) to direct care is roughly 3% for all beneficiaries. The top ten recoverable CHAMPUS DRGs for the SASA are overwhelmingly dominated by the psychiatric-related DRGs.

Overall, CHAMPUS outpatient visits represent about 9% of total service area outpatient visits. Just over 50% of the SASA CHAMPUS outpatient visits and direct care visits originate in the BAMC catchment area.

MTF Characteristics and Clinical Department Utilization.

WHMC provides the most outpatient visits in the SASA, with 65% of the outpatient active duty workload. Randolph AFB Clinic provides 40% of the outpatient visits for the BAMC catchment area, while Kelly and Brooks AFB Clinics provide less than 9% of the WHMC catchment area visits.

CHAMPUS outpatient visits are not a significant portion of the SASA outpatient demand, adding up to less than 10% of the total (Appendix 17).

Outpatient primary care/medicine visits per capita show a wide variation among beneficiary categories from

a low of 3.7 for beneficiaries age 65 and over to a high of 7.6 for active duty in the SASA (Appendix 18-21).

Appendix 22 shows the average outpatient utilization rates by clinical service and catchment areas for all beneficiaries in the SASA. The main flaw to this utilization study is that it assumes visits in the SASA were provided to SASA beneficiaries only. We know that there is a heavy aeromedical evacuation system which brings numerous referral patients to the SASA and there are also referrals from the surrounding military bases and posts.

A outpatient primary care utilization and origin study was accomplished using the WHMC primary care clinic. This study showed the outpatient utilization rate at 3.1 visits per individual utilizing the clinic (Appendix 23). Furthermore, the origin study based upon the zip code of the individuals visiting the primary care clinic, shows the concentration of visits exists in the northeast and northwest parts of San Antonio. This can be helpful when determining where to place civilian HMO locations (Appendix 24).

Projected Populations and Health Care Demand

The Vector Research Inc. report projected that from FY92 to FY94, populations of active duty and their

dependents would decrease almost 10%. The anticipated decrease for FY94 represented a 21% drop from FY89 levels. Other beneficiaries were projected to increase almost 2% from FY92 to FY94, and 4% from FY89.

Mission Requirements

Both WHMC and BAMC have major mission roles in the training of physicians. WHMC has 26 accredited programs for Graduate Medical Education (GME), while BAMC has 22 programs.

Facility Condition/Staffing and Ability to Enhance Services

WHMC has the largest physical capacity in the SASA: 1000 beds. It also has the greatest average daily patient load (ADPL), 600. BAMC's capacity and ADPL are roughly 646 beds and 387 inpatients per day on average, respectively.

A new BAMC is currently under construction and should be completed in FY 1996 with a bed capacity of 450 with capability to expand to 650 beds.

Direct Care System Analysis

System Workload

An analysis of the direct care system reveals that over 674,000 primary care visits are provided by the military MTF.

System Expenditures

MEPRS data shows that the average cost of a primary care clinic visit by a MHSS staff physician in the SASA is approximately \$79. In addition, MEPRS shows that it costs approximately \$20 per visit provided by the internal primary care partners for military support services (e.g., personnel and ancillary services).

Staffing by MTF

The current MHSS in the SASA is very much a specialty dominated system. A lot of what could be considered primary care is currently delivered by

specialists in the two medical centers. The outpatient clinics at Brooks, Kelly, Randolph, the troop medical clinics at Ft. Sam Houston and Lackland cannot provide the total requirement for primary care services as currently designed. This lack of adequate primary care access constrains efficient operation of the medical centers specialty clinics and provides a challenge to

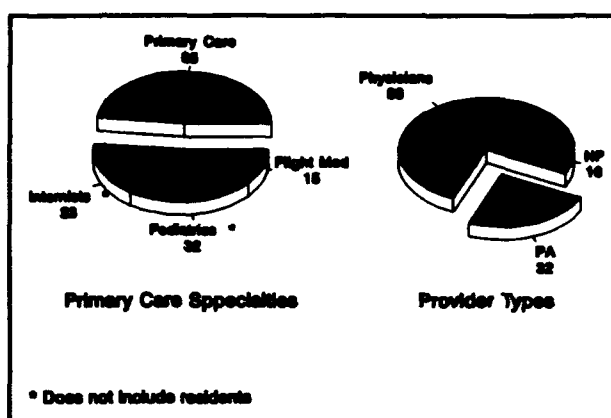


Figure 8 SASA Primary Care Provider Staffing

develop an suitable primary care network for the SASA.

There is a total of 135 primary care providers, this does not include the providers at the Occupational Medicine Clinic at Kelly AFB. Figure 8 displays the breakout by specialty and physician versus physician extenders.

In-Direct Care System Analysis

CHAMPUS Workload

There is a very small amount of CHAMPUS care in the SASA. The relative proportion of recoverable inpatient CHAMPUS to direct care is about 3 %. The top ten recoverable inpatient CHAMPUS episodes for all beneficiaries are overwhelmingly dominated by Psychiatric Group I and II services (Appendix 25 and 26). Most of the opportunity for savings comes from the control of mental health care utilization.

Most of the outpatient CHAMPUS expenditures are also attributed to Psychiatric Group I and II services (Appendix 27 and 28). The top ten CPT4 procedures for FY91 are detailed in Appendix 29.

CHAMPUS Expenditures

Approximately \$44 million is spent on CHAMPUS services in the SASA. The majority of the expenditures are in the inpatient services, accounting for approximately 76% or \$33.9 million (Appendix 30). Only

24% of the CHAMPUS expenditures are attributed to outpatient services (\$10.4 million) at an average government cost per outpatient visit of \$95.74. Over 40% of the outpatient services and 75% of the inpatient services are in the psychiatric-related services, as stated earlier. Four of the top ten CPT4 codes for FY91 are primary care related and account for \$2.9 million. This could be related to the previous statement that there is limited access to primary care and specialists are inappropriately providing some of these services.

CHAMPUS Providers

According to the FASS there are over 1500 primary care CHAMPUS providers in the SASA. The San Antonio CHAMPUS Participating Provider List includes the specialties and numbers shown in table 1.

These providers have already entered into an agreement with the SASA MTFs to be a CHAMPUS Participating Provider. Most of these providers have agreed to bill for less than the CHAMPUS allowable charge.

Provider Availability

All indications are that additional primary care capacity is not readily available in the San Antonio health care market and would likely require contractor

<u>SPECIALTY</u>	<u>QUANTITY</u>
Allergy-Immunology	3
Family Practice	9
Dermatology	3
Gastroenterology	3
Gynecology	1
Home Health Care	16
Internal Medicine	9
Nephrology	1
Neurology	4
Oncology	2
Ophthalmology	2
Orthopedics	12
Pediatrics	1
Psychiatrics	4
Psychology	8
Pulmonary Disease	3
Radiology	3
Radiotherapy	1
Rheumatology	2

Table 1: CHAMPUS Participating Providers by Specialty

assistance to develop one to augment the MHSS. In addition to the shortage of military primary care providers, the current distribution of existing civilian providers is heavily skewed toward the northside of San Antonio and could result in problems with meeting access guidelines set forth by DoD.

According to the Physicians & Surgeons M.D. Medical Specialty Guide in the Yellow Pages there are approximately fifteen group practices in the primary care services. Table 2 show the approximate number of primary care providers in the SASA (these numbers do not include the group practices previously mentioned).

<u>SPECIALTY</u>	<u>QUANTITY</u>
Family Practice	100
General Practice	5
Geriatrics	10
Internal Medicine	81
Pediatrics	72

Table 2: San Antonio Primary Care Providers

According to a document put together by The Academy for Health Services Marketing, San Antonio Chapter for the Medical Destinations San Antonio Strategic Planning Conference there appears to be no shortage of outpatient services available in San Antonio. For example, there are seven diagnostic imaging centers (among the 21 MRI units); eight free-standing urgent care centers; and eight free-standing outpatient surgery centers, which perform approximately 50,000 procedures annually. Of the approximately 2,600 practicing physicians in San Antonio, 62% provide specialty care.

Primary Care Network Development

Network Size

The size of the primary care network will be dependent on policy decisions made by executive management. These decisions pertain to the approach taken in the enrollment of beneficiaries. Initial enrollment of active duty will be mandatory, however,

the enrollment of all other categories can be accomplished on a phased approach over a three year period.

CHAMPUS Eligible Population = 120,000
Active Duty Population = 29,000

	Proj Enrollment	AD Pop	Total Enrollment	Provider Ratio	# Rq'd
1YR	18,000	+	29,000	=	47,000 / 1,700 = 27
2YR	36,000	+	29,000	=	65,000 / 1,700 = 38
3YR	48,000	+	29,000	=	77,000 / 1,700 = 45

Table 3: PCM Network Size Phased In With Enrollment Targets

The Luke/Williams CAM experienced enrollments of 15% of the CHAMPUS eligible beneficiaries in the first 12 months, 25% in the first 24 months, and 31% over the first 32 months. The DoD Demonstration Projects at Luke/Williams (CAM), Bergstrom(CAM), and California/Hawaii (CRI) had enrollment targets of 34% in two years, 26% in two years, and 20% in three years, respectively. For purposes of this paper I have established targets for the SASA based upon the above CAM/CRI targets and the experience in the Luke/Williams CAM. Table 3 addresses these enrollment targets and the resulting PCM network requirements based on these calculations. The table shows there will be a need for

27 PCMs in the first 12 months and by the end of the three year phased-in enrollment there will be a requirement for 45 total PCMs. The recommendations section will address the proposed arrangement of these PCMs to meet access requirements and to optimize the utilization of the direct care providers.

The ratio of 1:1,700 was determined by using an enrollment formula utilized by PACIFICARE HMO in San Antonio. The formula is based upon provider appointment availability and average visits per year per individual (Table 4).

The actual individual provider empanelment will be determined based upon their specialty training, experience, capabilities, and the enrollees age and intensity of care required. The actual empanelment ratio will range from as low as 1:800 (Internal Medicine) to 1:2,000 (Family Practice). The average ratio of 1:1,700 is to be used for determining the sizing of the primary care network for planning purposes.

For the purpose of initial sizing of the SASA primary care network staffing model, a ratio of 1:1,700 (Provider to Enrollee) was selected. When applying this ratio to the age segmented service area population, a rough estimate of the number of pediatric

and primary care providers needed to service the empaneled population can be calculated (this assumes the entire population enrolls in the HMO option).

EMPANELMENT FORMULA

3 PATIENTS / HR X 36 HRS OF PATIENT APPOINTMENT TIME / WK

= 108 VISITS/WK

108 VISITS/WK X 47 WORKING WKS PER YEAR

= 5,076 VISITS/YR

5,076 VISITS / 3.0 PRIMARY CARE OUTPATIENT UTILIZATION RATE

= 1,700

Table 4: Primary Care Network Empanelment Formula

Primary Care Manager (PCM) Role

The gatekeeper function centers around five clinical areas: primary care, family practice, pediatrics, internal medicine and flight medicine. These five clinical areas provide the bulk of primary care services in the direct care system and represent the core of the PCM function in the HMO benefit.

Enrolled beneficiaries will select a primary care provider (military or civilian) at time of enrollment. These PCM will ensure continuity of care by managing

the members care across the spectrum of care. The Luke/Williams CAM experienced a civilian provider preference in the selection of the PCM of 39%. This should be taken into consideration when developing the primary care network. The lack of an option to choose a civilian PCM could result in a reduced enrollment rate for the HMO option. This reduction in actual enrollment will minimize your impact on utilization control of the MHSS by the SASA beneficiaries.

When applying the 1:1,700 ratio to the age segmented service area population, a rough estimate of the number of primary care (GMO, PA, NP, Flight Medicine & Family Practice) and pediatric providers required to service the empaneled population can be calculated. Figure 9 reflects the results of this calculation.

Currently in the SASA, between primary care providers, internal medicine and pediatricians, there are 135 military and civil service providers providing care in the SASA clinics. There are also a number of partnership and contract arrangements in place to augment the staff to provide better access under the current delivery system. Appendix 31 shows that utilizing the network sizing model and based upon current primary care provider staffing in the SASA,

there is no need for augmentation from the civilian health care industry in San Antonio (assuming the empanelment ratio is accurate). However, as I will later discuss, there will be a need for at least two

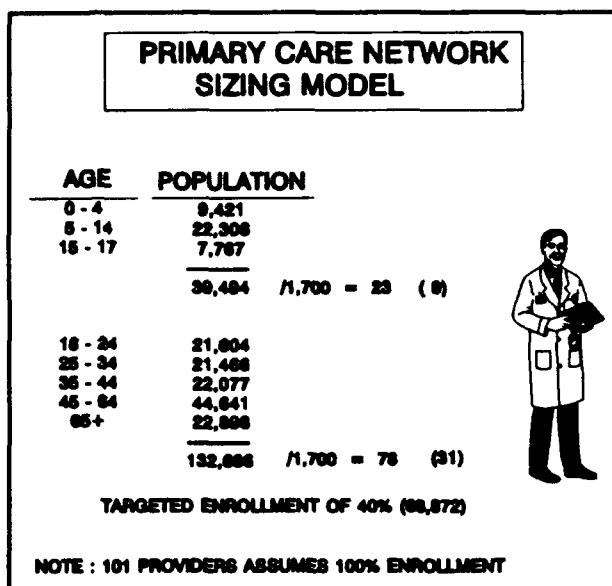


Figure 9 Primary Care Network Sizing Model

civilian HMOs at strategic locations in the SASA. This should be done to meet the needs of beneficiaries who would prefer to enroll with a civilian PCM instead of a military PCM.

Provider Location

These PCMs will be located to meet CCP access standards (near the concentrations of the beneficiary population; see Appendix 32). The direct care PCMs will be located at Kelly AFB, Brooks AFB, Randolph AFB, Ft Sam Houston, and Lackland AFB (Appendix 33). The PCMs should not be located inside the two medical centers, but instead in clinics located on the base or post.

CHAPTER 4

DISCUSSION

Implications of Findings

With the advent of DRG reform in the early 1980's, civilian hospitals went from a cost plus funding basis to a fixed price reimbursement system based on capitated fees for caring for a disease process. That situation has marked DoD's past year transitioned from a growing "fall out" cost supportive system to coping with a reduced, fixed yearly budgetary resource. In this environment of escalating costs and continued growth of our beneficiary population utilization management becomes as important to the direct care system as it is to our civilian counterparts. DoD must look not only at the CHAMPUS picture but also introduce utilization management into the MTF's if they are ever to get control of our expenditures in the direct care system and maximize our potential to deliver the most care for our limited dollars.

It is important as we build our UM structure that our focus not be directed to denying access to our patients nor interfering with the delivery of care by our providers. Barriers to care, whatever the mechanism, do not belong in our model and attempts to control costs by such means are ethically unsound and

fraught with risk. Health care professionals must take a proactive approach and create a system that places the patient in the appropriate cost effective setting and delivers the proper amount of care in a timely manner. Many of the current strategies and principles of UM are direct applications of clinical total quality management and support the concept that quality care is cost effective care.

The benefits of a managed care strategy in the SASA will have to be mostly realized in the direct care operations by the application managed care techniques as well as organizational quality improvement methods. This entails efforts to enroll beneficiaries with primary care managers (PCM) as well as elimination of inappropriate utilization of hospital/clinical, specialty referral, ancillary and emergency services. The use of the PCM or "gatekeeper" should assist with the control of referrals, ancillary, and emergency services.

Primary care physicians (PCP) for this discussion will be defined as internists, pediatricians, general medical officers, and family physicians. These PCP have been looked toward by payers, governments and employers as a means of controlling cost while maintaining high-quality services in a managed care

system. They will be expected to implement clinical guidelines as well as be held accountable for financial expenditures that occur as they treat and refer patients.

These PCP will be part of the team that will deliver health care in a vastly different manner than just several years ago. This team will include not only physicians but also physician assistants, nurse practitioners, pharmacists, and mental health and home health professionals. This team will deliver comprehensive primary care to individuals and families in different managed care delivery systems.

Growth in managed care is reorienting the nature of care delivery from a specialists-dominated system to a system driven by the primary care physician who acts as the "manager" of the system.

The primary care network must provide for access, longitudinal care and case management, in order for managed care to be successful. The current system of primary care in the SASA MTF's marginally provides only one of these; access, and that is not optimal based on the large percentage of unscheduled care that crowds the two military Emergency Departments.

The current structure of primary care is a fragmented system that does not support a consistent

long term relationship with a patient sponsor nor that sponsor's family by the same provider. This is not cost effective and not quality care.

The lack of continuity and the limited resources within the current primary care structure does not provide for effective primary care case management of a patient's medical needs. From a training level, and from an access emphasis, the primary care encounters are urgent care driven and as a consequence relies on the use of consults for definitive care which results in an excessive primary care burden on the limited direct care specialty resources. This limits access and dilutes the case mix for the training programs.

A properly designed primary care network will provide access, continuity of care from episode to episode, and allow the office and inpatient management of many common medical problems to resolution without specialty referral.

The providers in this network must possess sufficient skills to provide these comprehensive services. Family Practice, and General Internists, represent the ideal types of providers for such a network. Unfortunately, there is both a local and nationwide shortage of Family Practice physicians. General Internists are also not in abundance in numbers

sufficient for SASA.

Another model provides for a multi-disciplinary approach using Internists, Pediatricians, Family Practice physicians, and General Medical Officers in a common clinical setting where the sponsor and his family are enrolled as a family unit to the clinic to manage their care. Additionally, physician extenders such as Physician Assistants and Nurse Practitioners can be utilized in both the Family Practice and multi-disciplinary models.

The primary care network is the centerpiece of the entire managed care plan. The goal is to manage the health care of our beneficiaries and gain control of their utilization. This can only be realized under a "gatekeeper", primary care manager, health care delivery system. There has been some discussions at the SA-HCCC sub-committees and WHMC surrounding contracting the entire primary care network to the civilian sector through a true Family Practice Model HMO. Conceptually this is sound, if your only goal is to gain control of your referrals to specialists. However, that is not the entire issue for the SASA. As a matter of fact, a reduction of referrals could have a drastic impact on the GME programs at WHMC and BAMC, if there is too dramatic a decrease in specialty

referrals.

The MHSS needs to maintain strong control of the primary care network. In order to optimize the direct care system by controlling utilization and referrals, while maintaining the viability of our GME programs and contain costs. The only way to achieve both goals is through the control of the PCM "gatekeeper" network. However, there is value in contracting out a small piece of the primary care network. This would ensure that the HMO option is attractive to all beneficiaries. It would also provide the opportunity to develop and test skills in negotiating, contracting, and rate setting. Furthermore, it would allow for cost comparisons between the direct and in-direct care system and provide for internal competition with the civilian component.

Outpatient care in the HMO model can either be on or near the base grounds but for identity purposes should be a distinct unit from the specialty hospitals and clinics. Neighborhood locations are also desirable and provide convenience and proximity to care for our patients.

Based upon the provider staffing information provided by the MTFs in the SASA (Appendix 34) and the calculations in the previous sections, the primary care

network could be developed from the direct care system without augmentation from the in-direct (civilian) healthcare system. However, as previously stated, there needs to be an option for the beneficiaries to choose a civilian network provider. I would recommend two civilian primary care HMOs; one on the northeast side and one on the northwest side of San Antonio. This is based upon the beneficiary origin study from the DEERS data by zip code and the Vector Research study (Appendix 24).

These two HMOs should be contacted through a competitive bid process for approximately 20,000 lives (based upon 40% civilian preference rate) over the three year period. Providers should be compensated utilizing capitation payment to include primary, secondary, and tertiary care. The capitation should include a withhold and/or capitated risk pool for hospitalization and pharmaceuticals. Incentive programs should be developed to cover specialty referrals, hospitalization and pharmaceuticals (whether provided by military or civilian providers).

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

The MHSS will surely be entering a new era for health care delivery in this system. The MHSS should not enter this period with the same paradigm and organization. There are several cases of organizational failure, which resulted from organizations entering into new businesses, product lines, or markets without changing their organizational structure to match their new product or strategy (Belasco, 1990). You cannot begin a new paradigm with the same existing structure. Based upon this philosophy and the dramatic change managed care and HMOs will have on our health care delivery system, I have developed what I believe is the health care delivery system of the future for the MHSS.

Currently our institutions are departmentalized by specialty (see appendix 35). This will not facilitate enrollment of beneficiaries into a primary care management "gatekeeper", family approach to health care delivery. Under managed care the product has changed from an episodic treatment of an individual patient to a preventive, primary care approach to the entire family. It will also involve a customer service orientation and concentration upon the entire spectrum

of health care delivery (referral care, inpatient, etc.) not just one acute episodic visit.

Appendix 36 shows the proposed organization of the SASA joint service managed care office. This shift in health care delivery requires that organizational structure change (Figure 10). The PCM should be organized into clinics at the various clinical sites in the SASA and be separated from the traditional department/divisions. This will allow these providers to concentrate their efforts on one product line, the HMO enrolled beneficiary and allow for ease of transition to a different delivery system for these providers (PCM training, UM coordination, etc). Furthermore, this will allow the family to receive their care under the HMO concept at one clinic and location.

<u>LOCATION</u>	<u>#</u>	<u>PCP</u>	<u>IM</u>	<u>PED</u>
Kelly	1	4	1	1
Brooks	1	2	0	0
Randolph	1	4	1	2
Ft Sam	1	4	1	2
Lackland	1	4	1	1

NOTE: Ft. Sam, McWerthy Troop Clinic
Lackland, Medina or Dispensary

Table 5: SASA PCM Network Location and Provider Composition

The HMO clinic will be comprised of the following specialties: Family Practice physicians, GMOs,

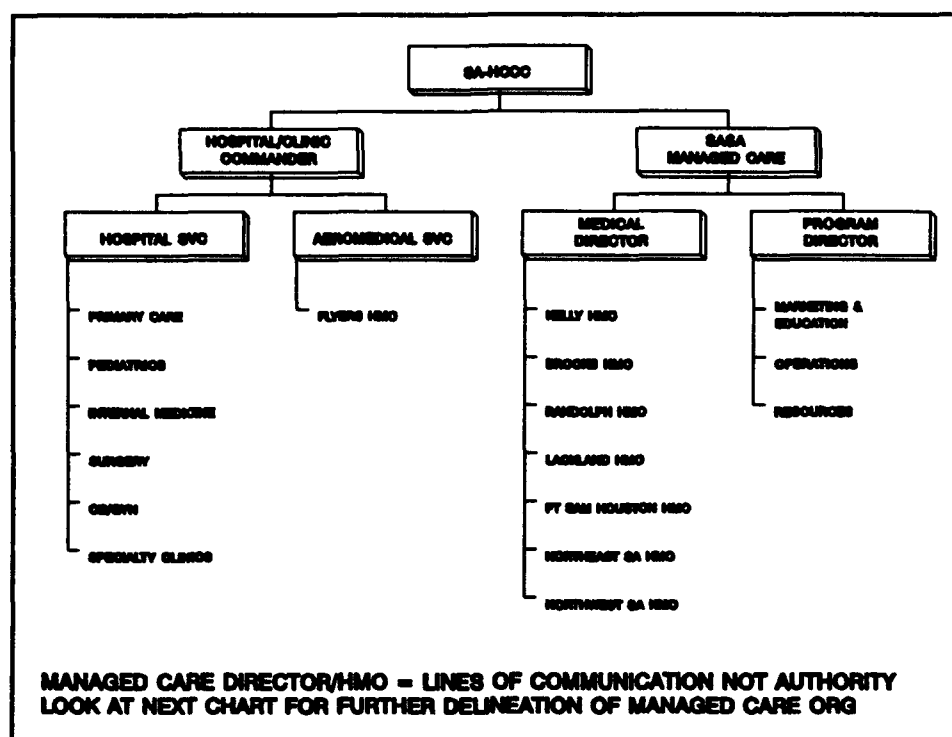


Figure 10 Organization Under Managed Care/HMO Concept

Physician Assistants, Nurse Practitioners, Pediatricians and Internists. The active duty personnel on flying status and their families will be enrolled with flight medicine physicians within the aeromedical services department. The exact composition of the HMO clinics will be based upon the beneficiary population demographics near the locations and actual experienced enrollment. Table 5 shows the recommended locations and HMO clinic composition based upon the calculations previously mentioned. These numbers

reflect the network after the three year phased in enrollment and is based upon a 40% enrollment target.

This new organizational structure would also lead to improved customer/patient satisfaction. It will provide a "one-stop-shop" location for their entire family's health care needs. This type of organization will allow for the practice of family medicine, especially if the health care needs of each family member are different. For example, maybe one member requires the care of an internist on a regular basis, while the other members could be cared for by a primary care provider or pediatrician. The entire family can now go to one clinic, one location for that care. However, under the current organization, the family would have to obtain their care from several different clinics and possibly even different locations (bases).

In addition to the above benefits, this multi-disciplinary model would allow for better utilization of the GMOs, PAs and NPs in the SASA. The SASA is not blessed with a abundance of Family Practice physicians that are residency trained in primary care case management. The internship year that GMOs, PAs and NPs experience is not sufficient to train them to provide longitudinal care and case management.

The multi-disciplinary HMO model would allow the

GMOs, PAs, and NPs to be put into an environment with providers trained in primary care case management. These providers after gaining experience in this clinical environment could gain sufficient experience to become better PCMs.

This organization would require the redistribution of provider resources between the facilities, both Army and Air Force and would result in joint service practices in these HMO clinics. This redistribution should not negatively effect the GME programs at WHMC or BAMC, but would however, provide a new environment for residents to receive training. Clinic rotations could be accomplished in the HMO clinic as well as the department clinics. According to Jacobs, M.D. and Tower (1992),

Residents' education is inexorably shifting to the ambulatory care setting. In addition, there is both a growing trend towards managed care (health maintenance organizations, preferred provider organizations, and utilization-controlled indemnity insurance), as well as increasing competition for patients to be served by "real world" practices. To respond to this, academic medicine centers (AMCs) have had to confront three generic problems: (1) the difficulty of making available the optimal practice organization in which both quality care and quality education can be offered without compromising either; (2) finding ways to finance practices of that type, which tend to be resource-intensive, yet demand cost containment; and (3) the need to recruit faculty skilled in the practice and teaching of primary, secondary, and consultative

general medicine, and the definition of explicit criteria to judge these individuals so as to guarantee their excellence. These daunting challenges are being responded to in various ways.

In order to maintain clinical control of their HMO patients, the HMO physicians will need to be credentialed at the medical centers where they can admit their HMO patients. Without such privileges the provider would not be able to practice adequate primary care management and would end up turning over control of their HMO patient to another provider at the medical center. This could result in less efficient or inappropriate utilization and loss of control by the PCM over primary care. Of course arrangements should be made to provide the provider with government vehicles or reimburse them monthly based upon mileage traveled between facilities. This would help to alleviate the financial burden of traveling from location to location from the provider. Each HMO clinic would need a Health Plan Coordinator (RN) to facilitate appropriate utilization of resources, help manage the HMO members care by working with the utilization management staff and act in a triage role or advise nurse capacity for the appointment process.

Under the organizational structure, the facility commander would still maintain authority for the

individual providers practicing in their MTF. The Managed Care Medical Director would be responsible for the oversight of the care provided by these HMO physicians in regards to quality, cost, access, and appropriateness of care. This would require cooperation and collaboration among the facility commander, physicians, and administrative staffs at each base or post.

We are assuredly entering into a new period for health care delivery in the MHSS. We should not consider moving into this new era while maintaining the same patient care approach and organizational structure. If we change our approach to health care delivery (managed care) without changing our structure organizationally, we could be setting our system up for failure and possibly eventual civilianization of the MHSS or contracting out of the majority of health care delivery.

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Benefits and Beneficiary Payments Under the Prime and PPO Programs

(See Note 1 below)

I. Outpatient Services:

ANNUAL DEDUCTIBLE	PRIME PROGRAM	PPO PROGRAM
Applied to all outpatient services.	NONE.	Standard CHAMPUS deductible as defined in the CHAMPUS Policy Manual.

Standard CHAMPUS Benefits	Beneficiary Copayment/Cost-Share	
TYPE OF SERVICE	PRIME PROGRAM (SEE NOTE 2)	PPO PROGRAM
PHYSICIAN SERVICES Office visits; outpatient office-based medical and surgical care; consultation, diagnosis and treatment by a specialist; allergy tests and treatment; osteopathic manipulation; medical supplies used within the office including casts, dressings, and splints.	\$5 copayment per visit.	Active Duty Family Members: Cost-share - 15% of fee negotiated by the contractor. Retirees and their Family Members and Survivors: Cost-share - 20% of the fee negotiated by the contractor.
LABORATORY AND X-RAY SERVICES	\$5 copayment per visit. (No copayment if included in provider's office visit.)	
ROUTINE PAP SMEARS Frequency to depend on physician recommendations based on the published guidelines of the Academy of Obstetrics and Gynecology.	\$5 copayment per visit. (No copayment if included in provider's office visit.)	
AMBULANCE SERVICES When medically necessary as defined by the CHAMPUS Policy Manual and the service is a covered benefit.	\$5 copayment per occurrence.	
EMERGENCY SERVICES Emergency and urgently needed care obtained on an outpatient basis, both network and non-network, and in and out of Region.	\$25 copayment per emergency room visit. \$15 copayment per urgent care center visit..	

NOTE 1: The beneficiary payments in this attachment shall be applied during Option Year 1. In Option Years 2 through 5, beneficiary copayments (i.e., beneficiary payments expressed as a specified amount) shall be updated for inflation annually (rounded to the nearest whole dollar) by the national CPIU medical index. Beneficiary cost-shares (i.e., beneficiary payments as expressed as a percentage of the provider's fee) will not be similarly updated.

NOTE 2: No copayment under the Prime program for primary care or preventive services for family members of active duty or retired sponsors with pay grades of E-4 and below.

Benefits and Beneficiary Payments Under the Prime and PPO Programs (continued)

I. Outpatient Services (continued):

Standard CHAMPUS Benefits (continued)	Beneficiary Copayment/Cost-Share	
	PRIME PROGRAM	PPO PROGRAM
TYPE OF SERVICE DURABLE MEDICAL EQUIPMENT, PROSTHETIC DEVICES, AND MEDICAL SUPPLIES PRESCRIBED BY AN AUTHORIZED PROVIDER WHICH ARE COVERED BENEFITS. (If dispensed for use outside of the office or after the home visit.)	Cost share - 10% of the fee negotiated by the contractor.	Active Duty Family Members Members: Cost-share - 15% of the fee negotiated by the contractor.
HOME HEALTH CARE Part-time skilled nursing care, physical, speech & occupational therapy when medically necessary and which are covered benefits.	\$5 copayment per visit.	Retirees and their Family Members and Survivors: Cost-share - 20% of the fee negotiated by the contractor.
FAMILY HEALTH SERVICES Family planning and well baby care (up to 24 months of age). The exclusions listed in the CHAMPUS Policy Manual will apply.	\$5 copayment per visit.	
OUTPATIENT MENTAL HEALTH One hour of therapy, no more than two times each week (when medically necessary).	\$10 copayment for individual visits. \$5 copayment for group visits.	
PARTIAL HOSPITALIZATION FOR ALCOHOLISM TREATMENT Up to 21 days for rehabilitative on a limited hour per day basis. Does not count toward the limits for days of mental health inpatient care.		
PRESCRIPTION DRUGS	\$4 copayment per Rx up to a 30-day supply for Active Duty Family Members. \$5 copayment per Rx up to a 30-day supply for Retirees, their Family Members and Survivors.	
EYE EXAMINATIONS One routine examination per year covered for family members of active duty sponsors.	\$5 copayment per examination.	Cost-share - 15% of the fee negotiated by the contractor.

Benefits and Beneficiary Payments Under the Prime and PPO Programs (continued)**I. Outpatient Services (continued):**

Standard CHAMPUS Benefits (continued) TYPE OF SERVICE	Beneficiary Copayment/Cost-Share	
	PRIME PROGRAM	PPO PROGRAM
AMBULATORY SURGERY (Same Day) Authorized hospital-based or free-standing ambulatory surgical center that is CHAMPUS certified.	Active Duty Family Members: None. Retirees and their Family Members and Survivors: \$5 copayment for primary surgeon only.	Active Duty Family Members: None. Retirees and their Family Members and Survivors: 20% cost-share - fee negotiated by the contractor.
IMMUNIZATIONS Immunizations required for active duty family members whose sponsors have permanent change of station orders to overseas locations.	\$5 copayment per visit.	Active Duty Family Members: Cost-share - 15% of the fee negotiated by the contractor.

Enhanced Benefits (NOTE 3) TYPE OF SERVICE	Beneficiary Copayment
	PRIME PROGRAM
IMMUNIZATIONS Pediatric and adult immunizations as recommended by the American Academy of Pediatrics for children and by the U.S. Public Health Service for adults.	\$5 copayment per visit up to 24 months of age. (See Family Health Services.) \$5 copayment per immunization for over 2 years old.
PERIODIC PHYSICAL EXAMINATIONS Conducted by Primary Care Manager for ages over 24 months. (For well baby care up to 24 months of age, see "Family Health Services" above.)	\$5 copayment per physical for ages 2-6. \$15 copayment per physical for ages 7 and over.
EYE EXAMINATIONS One routine exam per year covered for retirees under age 18, and survivors and family members under age 18.	\$5 copayment per examination.
WELLNESS CLASSES, COMMUNITY HEALTH SERVICES, AND COMMUNITY RESOURCE COORDINATION	No charge or minimal copayment.

NOTE 3: No enhanced outpatient benefits under the PPO Program.

Benefits and Beneficiary Payments Under the Prime and PPO Programs (continued)

II. Inpatient Services:

Standard CHAMPUS Benefits (SEE NOTE 4) TYPE OF SERVICE	Beneficiary Copayment/Cost-Share	
	PRIME PROGRAM	PPO PROGRAM
HOSPITALIZATION Semiprivate room (and when medically necessary, special care units), general nursing, and hospital service. Includes inpatient physician and their surgical services, meals including special diets, drugs and medications while an inpatient, operating and recovery room, anesthesia, laboratory tests, x-rays and other radiology services, necessary medical supplies and appliances, blood and blood products. Unlimited services with authorization as medically necessary.	Active Duty Family Members: None. Retirees and their Family Members and Survivors: \$75 per day copayment, with a \$750 maximum per admission for institutional services. None for professional services.	Active Duty Family Members: None. Retirees and their Family Members and Survivors: \$125 per day copayment or 25% cost-share of total charges (based on the fee schedule negotiated by the contractor) for institutional services, whichever is less, plus 20% cost-share of separately billed professional charges (based on the fee schedule negotiated by the contractor).
MATERNITY Hospital and professional services (prenatal, postnatal). Unlimited services with authorization, as medically necessary.		
SKILLED NURSING FACILITY CARE Semiprivate room, regular nursing services, meals including special diets, physical, occupational and speech therapy, drugs furnished by the facility, necessary medical supplies, and appliances. Unlimited services with authorization, as medically necessary.		

NOTE 4: No enhanced inpatient benefits under Prime or PPO Programs.

Benefits and Beneficiary Payments Under the Prime and PPO Programs (continued)II. Inpatient Services (continued):

Standard CHAMPUS Benefits (continued) TYPE OF SERVICE	Beneficiary Copayment/Cost-Share	
	PRIME PROGRAM	PPO PROGRAM
HOSPITALIZATION FOR MENTAL ILLNESS With authorization, up to 30 days per fiscal year for adults (age 19+), up to 45 days per fiscal year for children under age 19.	Active Duty Family Members: None.	Active Duty Family Members: None.
ALCOHOLISM (Inpatient, partial) With authorization, 7 days for detoxification and 21 days for rehabilitation per 365 days. Maximum of one rehabilitation program per year and three per lifetime. Detoxification and rehabilitation days count toward limit for mental health benefits.	Retirees and their Family Members and Survivors: \$50 per day copayment or 25% cost-share of total charges (based on the fee schedule negotiated by the contractor), whichever is less.	Retirees and their Family Members and Survivors: \$50 per day copayment or 25% cost-share of total charges (based on the fee schedule negotiated by the contractor), whichever is less, plus 20% cost-share of separately billed professional charges (based on the fee schedule negotiated by the contractor).

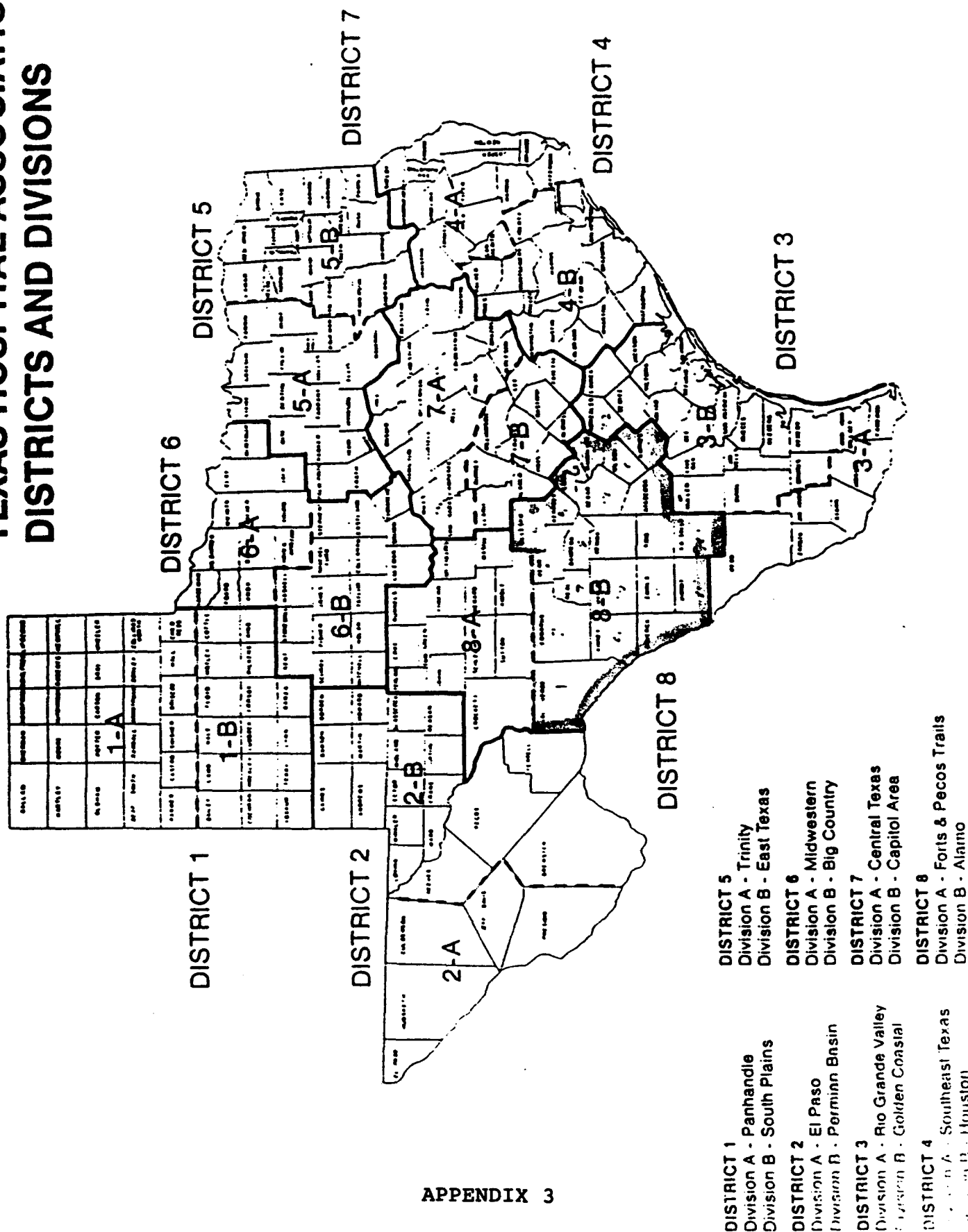
Group Model HMOs
Physician Staffing Ratios

HMO	Enrollment	Primary Physicians	Members/ Physician	Specialty Physicians	Member/ Specialis
Kaiser/No.CA	2438850	1855	1315	5000	488
Kaiser/So.CA	2291250	1220	1878	3650	628
Health Alliance Plans of Michigan	388836	539	721	1871	208
Kaiser/Northwest	370550	290	1278	640	579
Kaiser/Mid Atlantic	280450	185	1516	970	289
Kaiser/Colorado	256950	170	1511	445	577
Kaiser/Hawaii	182125	140	1301	340	536
Kaiser/Georgia	157400	115	1369	230	684
Fallon Comm. Hlth Pln	137364	129	1065	316	435
Pru Care/Houston	132136	81	1631	114	1159
Kaiser/Texas	116570	100	1166	555	210
Kaiser/Northeast	116425	120	970	515	226
Kaiser/No. Carolina	108700	90	1208	525	207
Geisinger Hlth Pln	103823	201	517	645	161
Oschner Health Plan	91242	69	1322	337	271
Scott & White Health Plan	74033	82	903	300	247
Pru Care of Austin	58613	71	826	348	168
Total	7305317	5457	1339	16801	435

Source: Managed Health Care News, Sept 1992 (From The Inter Study
Competitive Edge, Excelsior, Minn 1992)

SA-HCCC (Projected based on ratios)	185000	138	1339	425	435
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TEXAS HOSPITAL ASSOCIATION DISTRICTS AND DIVISIONS



Managed Care Statistics

Statistics	8B	4B	5A	State
HMO Enrollment	72,383	369,397	488,232	1,362,687
HMO Penetration	4.5%	9.4%	11.5%	8.0%
% Hospitals with HMO Contracts	40.0%	55.6%	55.3%	34.7%
% Hospitals with PPO Contracts	52.5%	69.7%	68.4%	48.0%
PPOs in Operation	5	11	11	74

Source: State Board of Insurance, IHA Division of Health Care Finance, American Association of PPOs

RAPS MODEL FY90 BASELINE POPULATION ESTIMATES

SAN ANTONIO SERVICE AREA ALL DoD SERVICE AREA BENEFICIARIES

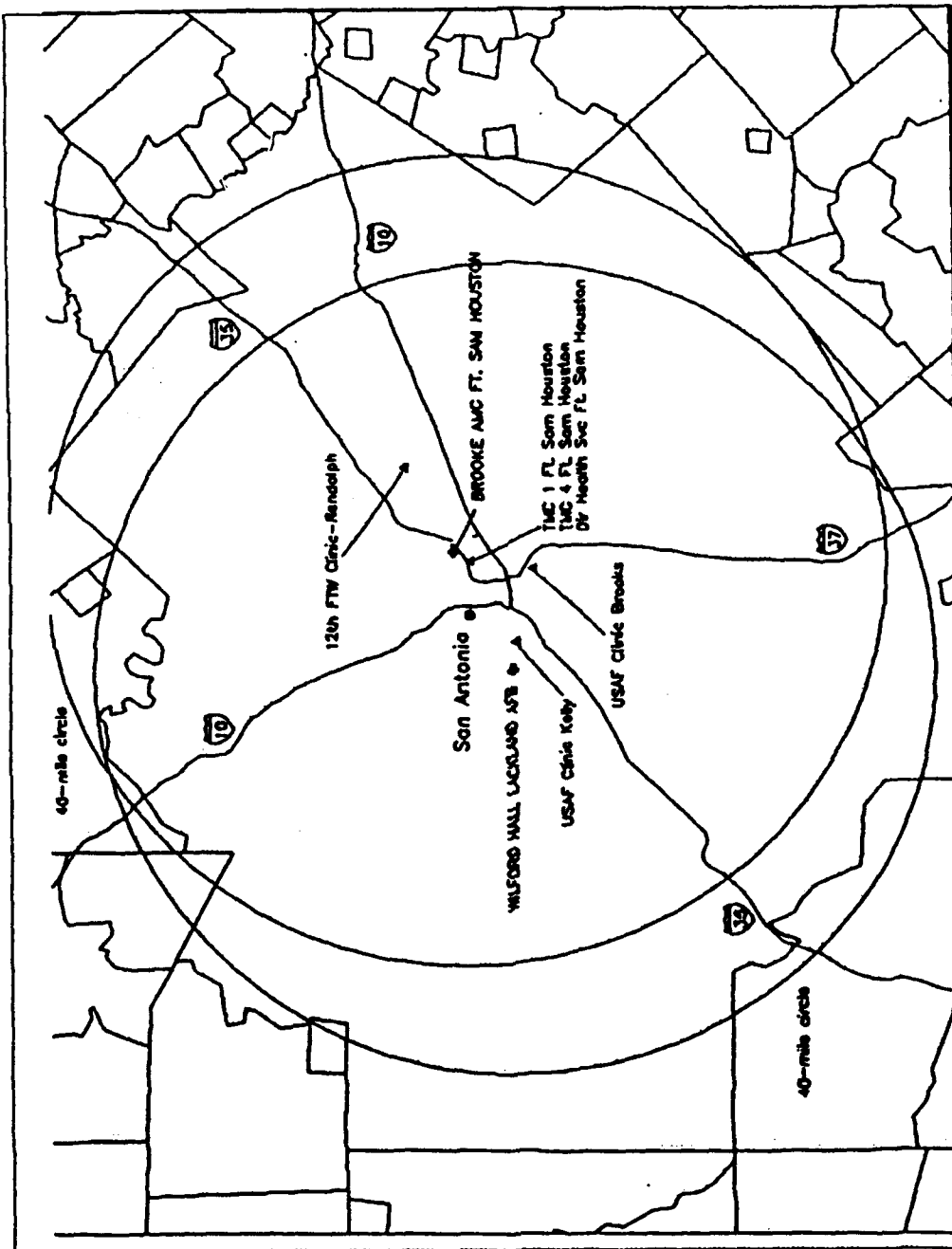
POPULATION BY AGE/SEX

AGE/SEX	ACTIVE DUTY	ACT DTY DEPS	RETIRED	DEPS OF RETIRED	SURVIVORS	OTHERS	TOTAL
00-04/M	0	4375	0	296	15	101	4787
05-14/M	0	8235	0	2684	162	321	11402
15-17/M	0	1770	0	1998	106	85	3959
18-24/M	5984	1424	38	3390	214	379	11429
25-34/M	8891	677	227	134	22	296	10247
35-44/M	6641	392	3043	68	20	340	10504
45-64/M	1266	160	20720	53	9	152	22360
65+ /M	0	26	10565	55	11	0	10657
00-04/F	0	4212	0	296	8	118	4634
05-14/F	0	7700	0	2747	169	288	10904
15-17/F	0	1674	0	1924	118	92	3808
18-24/F	2082	4190	4	3438	248	213	10175
25-34/F	2797	7204	54	789	93	282	11219
35-44/F	1259	5089	176	4514	254	281	11573
45-64/F	93	1114	404	18216	2373	81	22281
65+ /F	0	106	325	7358	4447	5	12241
00-04	0	8587	0	592	23	219	9421
05-14	0	15935	0	5431	331	609	22306
15-17	0	3444	0	3922	224	177	7767
18-24	8066	5614	42	6828	462	592	21604
25-34	11688	7881	281	923	115	578	21466
35-44	7900	5481	3219	4582	274	621	22077
45-64	1359	1274	21124	18269	2382	233	44641
65+	0	132	10890	7413	4458	5	22898
TOTAL	29013	48348	35556	47960	8269	3034	172180

PERCENT BY AGE AND BENFICIARY CATEGORY

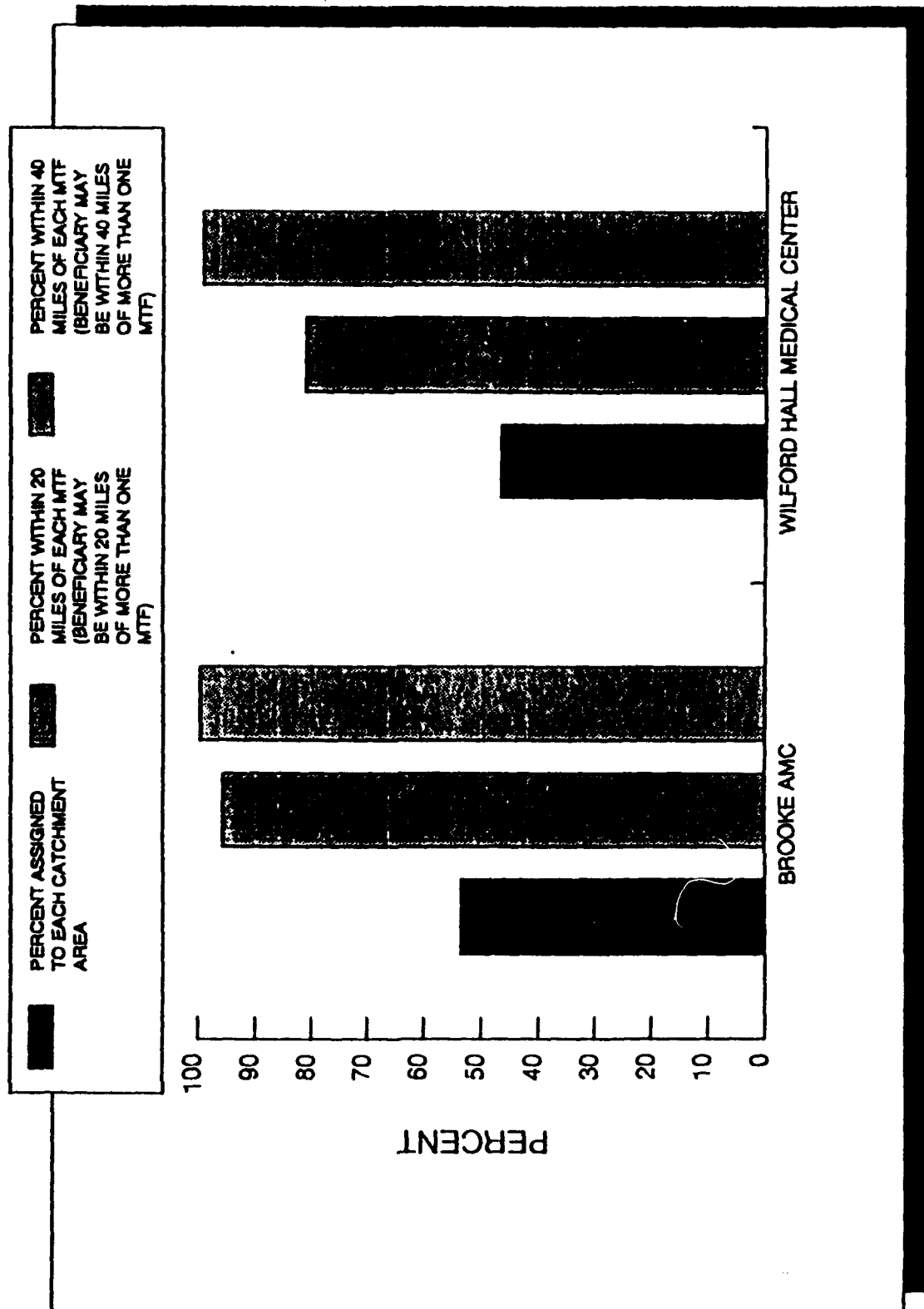
AGE	ACTIVE DUTY	ACT DTY DEPS	RETIRED	DEPS OF RETIRED	SURVIVORS	OTHERS	TOTAL
00-17	0.00%	16.24%	0.00%	5.78%	0.34%	0.58%	22.94%
18-44	16.06%	11.02%	2.06%	7.16%	0.49%	1.04%	37.84%
45-64	0.79%	0.74%	12.27%	10.61%	1.38%	0.14%	25.93%
65+	0.00%	0.08%	6.32%	4.31%	2.59%	0.00%	13.30%
TOTAL	16.85%	28.08%	20.65%	27.85%	4.80%	1.76%	100.00%

CHAMPUS ELIGIBLE = 120269



San Antonio Geographic Service Area

PERCENT OF SAN ANTONIO SERVICE AREA BENEFICIARIES ASSIGNED TO EACH CATCHMENT AREA VERSUS PERCENT OF SAN ANTONIO SERVICE AREA BENEFICIARIES RESIDING WITHIN 20 MILES AND 40 MILES OF EACH MTF



POPULATION ASSIGNED TO SAN ANTONIO CATCHMENT AREAS VERSUS POPULATION
WITHIN 20 MILES AND 40 MILES OF MTFs

APPENDIX 8

WILFORD HALL USAF MEDICAL CENTER

BROOKE AMC

CATCHMENT AREA

SPONSOR SERVICE	ACTIVE DUTY	DEPS OF ACT DTY	DEPS OF MED ELC MG/RES	DEPS OF RETIRED	DEPS OF SURVIVOR	TOTAL		
ARMY	2388	14739	868	1158	10888	3732	54371	
NAVY	495	611	56	69	1072	1296	382	
AFLC/AT	0	234	..	..	..	..	234	
USMC	79	191	10	14	366	476	85	1221
USAF	5254	9232	39	68	6837	9751	1245	32416
USCG	8	44	1	0	79	92	12	238
OTHER	5	6	0	0	12	12	65	100
TOTAL	15145	23366	240	266	15652	22102	3595	80363

WITHIN 20 MILES

SPONSOR SERVICE	ACTIVE DUTY	DEPS OF ACT DTY	DEPS OF MED ELC MG/RES	DEPS OF RETIRED	DEPS OF SURVIVOR	TOTAL	
ARMY	8475	14825	832	1145	10412	3634	53432
NAVY	865	1016	73	82	1368	321	5326
AFLC/AT	0	336	..	..	..	..	336
USMC	320	434	11	17	506	743	2154
USAF	19696	30817	208	238	19257	4266	103371
USCG	8	64	1	0	104	18	325
OTHER	6	8	0	0	15	96	136
TOTAL	29374	47500	1125	1488	32262	8458	165289

WITHIN 40 MILES

SPONSOR SERVICE	ACTIVE DUTY	DEPS OF ACT DTY	DEPS OF MED ELC MG/RES	DEPS OF RETIRED	DEPS OF SURVIVOR	TOTAL
ARMY	8475	15070	894	1199	14964	3806
NAVY	869	1045	75	97	1585	2045
AFLC/AT	0	377
USMC	320	446	14	17	561	829
USAF	19696	31313	222	253	21297	30068
USCG	8	69	1	0	122	148
OTHER	6	8	0	0	16	14
TOTAL	29374	48348	1206	1566	34480	48068
SPONSOR SERVICE	ACTIVE DUTY	DEPS OF ACT DTY	DEPS OF MED ELC MG/RES	DEPS OF RETIRED	DEPS OF SURVIVOR	TOTAL
ARMY	8475	15040	875	1187	10973	14807
NAVY	869	1045	75	97	1559	2020
AFLC/AT	0	369
USMC	320	449	14	17	563	824
USAF	19696	31275	218	249	21108	29842
USCG	8	68	1	0	118	148
OTHER	6	8	0	0	17	15
TOTAL	29374	48274	1183	1550	34358	47656
SPONSOR SERVICE	ACTIVE DUTY	DEPS OF ACT DTY	DEPS OF MED ELC MG/RES	DEPS OF RETIRED	DEPS OF SURVIVOR	TOTAL
ARMY	8475	15040	875	1187	10973	14807
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AFLC/AT	0	369
USMC	320	449	14	17	563	824
USAF	19696	31275	218	249	21108	298

SOURCE: RAPS, Version 4.24.

INPATIENT CATCHMENT AREA

0117 - WILFORD HALL MED CTR-LACKLAND

ZIP CODES WITHIN 40 MILES OF FACILITY

ZIP CODE	TOWN NAME	STATE	STATUS	DIST	NEW ZIP
78002	ATASCOSA	TX	OVERLAP	10	
78003	BANDERA	TX	NO OVERLAP	36	
78004	BERGHEIM	TX	OVERLAP	31	
78005	BIGFOOT	TX	OVERLAP	28	
78006	BOERNE	TX	OVERLAP	29	
78009	CASTROVILLE	TX	OVERLAP	16	
78011	CHARLOTTE	TX	NO OVERLAP	36	
78016	DEVINE	TX	OVERLAP	24	
78023	HELOTES	TX	OVERLAP	13	
78026	JOURDANTON	TX	OVERLAP	33	
78027	KENDALLIA	TX	OVERLAP	40	
78039	LA COSTE	TX	OVERLAP	12	
78050	LENNING	TX	OVERLAP	23	
78052	LYTLE	TX	OVERLAP	14	
78053	MC COT	TX	NO OVERLAP	40	
78054	MADONIA	TX	OVERLAP	6	
78056	MICO	TX	OVERLAP	19	
78057	MOORE	TX	NO OVERLAP	32	
78059	NATALIA	TX	OVERLAP	19	
78063	PIPE CREEK	TX	OVERLAP	29	
78064	PLEASANTON	TX	OVERLAP	30	
78065	POTEET	TX	OVERLAP	24	
78066	RIO MEDINA	TX	OVERLAP	16	
78069	SOMERSET	TX	OVERLAP	11	
78070	SPRING BRANCH	TX	OVERLAP	36	
78073	VON ORMY	TX	OVERLAP	7	
78074	VARING	TX	OVERLAP	40	
78101	ADKINS	TX	OVERLAP	22	
78108	CIBOLO	TX	OVERLAP	26	
78109	CONVERSE	TX	OVERLAP	21	
78112	ELMHORF	TX	OVERLAP	19	
78114	FLORESVILLE	TX	OVERLAP	33	
78121	LA VERNIA	TX	OVERLAP	31	
78123	MC QUEENEY	TX	OVERLAP	38	
78124	MARION	TX	OVERLAP	31	
78130	CANYON LAKE	TX	OVERLAP	37	
78131	NEW BRAUNFELS	TX	OVERLAP	37	
78132	NEW BRAUNFELS	TX	OVERLAP	37	
78133	NEW BRAUNFELS	TX	OVERLAP	37	
78147	POTH	TX	OVERLAP	39	
78148	RANDOLPH AFB	TX	OVERLAP	22	
78150	UNIVERSAL CY	TX	OVERLAP	24	
78152	SAINT NEONIG	TX	OVERLAP	26	
78153	SASPAHCO	TX	OVERLAP	21	
78154	SCHERTZ	TX	OVERLAP	24	
78161	SUTHERLAND SPG	TX	OVERLAP	35	
78163	WETHORE	TX	OVERLAP	17	

INPATIENT CATCHMENT AREA

0117 - WILFORD HALL MED CTR-LACKLAND

ZIP CODES WITHIN 40 MILES OF FACILITY (CONTINUED)

ZIP CODE	TOWN NAME	STATE	STATUS	DIST	NEW ZIP
78201	SAN ANTONIO	TX	OVERLAP	6	
78202	SAN ANTONIO	TX	OVERLAP	10	
78203	SAN ANTONIO	TX	OVERLAP	10	
78204	SAN ANTONIO	TX	OVERLAP	8	
78205	SAN ANTONIO	TX	OVERLAP	8	
78206	SAN ANTONIO	TX	OVERLAP	8	
78207	SAN ANTONIO	TX	OVERLAP	6	
78208	SAN ANTONIO	TX	OVERLAP	10	
78209	ALAMO HEIGHTS	TX	OVERLAP	11	
78210	SAN ANTONIO	TX	OVERLAP	8	
78211	SAN ANTONIO	TX	OVERLAP	4	
78212	SAN ANTONIO	TX	OVERLAP	9	
78213	SAN ANTONIO	TX	OVERLAP	10	
78214	SAN ANTONIO	TX	OVERLAP	11	
78215	SAN ANTONIO	TX	OVERLAP	11	
78216	COUNTRYSIDE PLZ	TX	OVERLAP	13	
78217	SAN ANTONIO	TX	OVERLAP	17	
78218	SAN ANTONIO	TX	OVERLAP	14	
78219	KIRBY	TX	OVERLAP	13	
78220	SAN ANTONIO	TX	OVERLAP	13	
78221	SAN ANTONIO	TX	OVERLAP	6	
78222	SAN ANTONIO	TX	OVERLAP	13	
78223	SAN ANTONIO	TX	OVERLAP	11	
78224	SAN ANTONIO	TX	OVERLAP	7	
78225	SAN ANTONIO	TX	OVERLAP	5	
78226	SAN ANTONIO	TX	OVERLAP	3	
78227	SAN ANTONIO	TX	OVERLAP	3	
78228	SAN ANTONIO	TX	OVERLAP	6	
78229	SAN ANTONIO	TX	OVERLAP	8	
78230	SAN ANTONIO	TX	OVERLAP	11	
78231	SAN ANTONIO	TX	OVERLAP	14	
78232	SAN ANTONIO	TX	OVERLAP	16	
78233	SAN ANTONIO	TX	OVERLAP	19	
78234	FT SAN HOUSTON	TX	OVERLAP	12	
78235	BROOKS A F B	TX	OVERLAP	12	
78236	LACKLAND AFB	TX	OVERLAP	0	
78237	SAN ANTONIO	TX	OVERLAP	2	
78238	OLD MILL	TX	OVERLAP	5	
78239	SAN ANTONIO	TX	OVERLAP	18	
78240	SAN ANTONIO	TX	OVERLAP	9	
78241	KELLY A F B	TX	OVERLAP	2	
78242	SAN ANTONIO	TX	OVERLAP	4	
78243	SAN ANTONIO	TX	OVERLAP	8	
78244	SAN ANTONIO	TX	OVERLAP	20	
78245	SAN ANTONIO	TX	OVERLAP	6	
78246	AIRPORT HALL	TX	OVERLAP	17	
78247	SAN ANTONIO	TX	OVERLAP	19	

INPATIENT CATCHMENT AREA

0117 - WILFORD HALL MED CTR-LACKLAND

ZIP CODES WITHIN 40 MILES OF FACILITY (CONTINUED)

ZIP CODE	TOWN NAME	STATE	STATUS	DIST	NEW ZIP
78268	SAN ANTONIO	TX	OVERLAP	16	
78269	SAN ANTONIO	TX	OVERLAP	12	
78250	SAN ANTONIO	TX	OVERLAP	9	
78251	SAN ANTONIO	TX	OVERLAP	6	
78252	SAN ANTONIO	TX	OVERLAP	3	
78253	SAN ANTONIO	TX	OVERLAP	18	
78254	SAN ANTONIO	TX	OVERLAP	12	
78255	SAN ANTONIO	TX	OVERLAP	16	
78256	SAN ANTONIO	TX	OVERLAP	16	
78257	SAN ANTONIO	TX	OVERLAP	18	
78258	SAN ANTONIO	TX	OVERLAP	19	
78259	SAN ANTONIO	TX	OVERLAP	19	
78260	SAN ANTONIO	TX	OVERLAP	24	
78261	SAN ANTONIO	TX	OVERLAP	25	
78262	SAN ANTONIO	TX	OVERLAP	16	
78263	SAN ANTONIO	TX	OVERLAP	18	
78264	SAN ANTONIO	TX	OVERLAP	14	
78265	SAN ANTONIO	TX	OVERLAP	8	
78266	SAN ANTONIO	TX	OVERLAP	6	
78268	LEON VALLEY	TX	OVERLAP	5	
78269	SAN ANTONIO	TX	OVERLAP	8	
78270	SAN ANTONIO	TX	OVERLAP	16	
78275	SAN ANTONIO	TX	OVERLAP	8	
78278	SAN ANTONIO	TX	OVERLAP	13	
78279	SAN ANTONIO	TX	OVERLAP	13	
78280	OLD MILL	TX	OVERLAP	5	
78283	SAN ANTONIO	TX	OVERLAP	7	
78284	SAN ANTONIO	TX	OVERLAP	8	
78285	SAN ANTONIO	TX	OVERLAP	8	
78286	SAN ANTONIO	TX	OVERLAP	6	
78288	SAN ANTONIO	TX	OVERLAP	8	
78289	SAN ANTONIO	TX	OVERLAP	8	
78290	SAN ANTONIO	TX	OVERLAP	6	
78291	SAN ANTONIO	TX	OVERLAP	8	
78292	SAN ANTONIO	TX	OVERLAP	8	
78293	SAN ANTONIO	TX	OVERLAP	8	
78294	SAN ANTONIO	TX	OVERLAP	8	
78295	SAN ANTONIO	TX	OVERLAP	8	
78296	SAN ANTONIO	TX	OVERLAP	8	
78297	SAN ANTONIO	TX	OVERLAP	8	
78298	SAN ANTONIO	TX	OVERLAP	8	
78299	SAN ANTONIO	TX	OVERLAP	8	
78850	D' MANIS	TX	NO OVERLAP	40	
78861	DUNLAY	TX	NO OVERLAP	32	
78866	YANCEY	TX	NO OVERLAP	35	

INPATIENT CATCHMENT AREA

0192 - ST JOHNS USTF NASSAU BAY

ZIP CODES WITHIN 40 MILES OF FACILITY

ZIP CODE	TOWN NAME	STATE	STATUS	DIST	NEW ZIP
77001	HOUSTON	TX	NO OVERLAP	22	
77002	HOUSTON	TX	NO OVERLAP	22	
77003	HOUSTON	TX	NO OVERLAP	21	
77004	HOUSTON	TX	NO OVERLAP	21	
77005	HOUSTON	TX	NO OVERLAP	23	
77006	FAIRVIEW	TX	NO OVERLAP	25	
77007	HOUSTON	TX	NO OVERLAP	25	
77008	HOUSTON	TX	NO OVERLAP	26	
77009	HOUSTON	TX	NO OVERLAP	23	
77010	HOUSTON	TX	NO OVERLAP	22	
77011	HOUSTON	TX	NO OVERLAP	20	
77012	HOUSTON	TX	NO OVERLAP	16	
77013	HOUSTON	TX	NO OVERLAP	19	
77014	WESTFIELD	TX	NO OVERLAP	37	
77015	HOUSTON	TX	NO OVERLAP	17	
77016	HOUSTON	TX	NO OVERLAP	25	
77017	HOUSTON	TX	NO OVERLAP	14	
77018	HOUSTON	TX	NO OVERLAP	28	
77019	RIVER OAKS	TX	NO OVERLAP	24	
77020	HOUSTON	TX	NO OVERLAP	21	
77021	HOUSTON	TX	NO OVERLAP	20	
77022	HOUSTON	TX	NO OVERLAP	26	
77023	HOUSTON	TX	NO OVERLAP	19	
77024	HOUSTON	TX	NO OVERLAP	31	
77025	HOUSTON	TX	NO OVERLAP	23	
77026	HOUSTON	TX	NO OVERLAP	23	
77027	HOUSTON	TX	NO OVERLAP	27	
77028	HOUSTON	TX	NO OVERLAP	22	
77029	JACINTO CITY	TX	NO OVERLAP	18	
77030	HOUSTON	TX	NO OVERLAP	21	
77031	HOUSTON	TX	NO OVERLAP	29	
77032	HOUSTON	TX	NO OVERLAP	32	
77033	HOUSTON	TX	NO OVERLAP	17	
77034	HOUSTON	TX	NO OVERLAP	8	
77035	HOUSTON	TX	NO OVERLAP	25	
77036	HOUSTON	TX	NO OVERLAP	29	
77037	HOUSTON	TX	NO OVERLAP	30	
77038	HOUSTON	TX	NO OVERLAP	33	
77039	HOUSTON	TX	NO OVERLAP	29	
77040	HOUSTON	TX	NO OVERLAP	34	
77041	HOUSTON	TX	NO OVERLAP	37	
77042	HOUSTON	TX	NO OVERLAP	30	
77043	HOUSTON	TX	NO OVERLAP	34	
77044	HOUSTON	TX	NO OVERLAP	21	
77045	HOUSTON	TX	NO OVERLAP	23	
77046	HOUSTON	TX	NO OVERLAP	26	
77047	HOUSTON	TX	NO OVERLAP	17	

INPATIENT CATCHMENT AREA

0109 - BROOKE AMC (JHMC)-FT SAN HOUSTON

ZIP CODES WITHIN 40 MILES OF FACILITY

ZIP CODE	TOWN NAME	STATE	STATUS	DIST	NEW ZIP
78002	ATASCOSA	TX	OVERLAP	22	
78004	BERGHEIM	TX	OVERLAP	27	
78005	81GFOOT	TX	OVERLAP	38	
78006	BOERNE	TX	OVERLAP	28	
78009	CASTROVILLE	TX	OVERLAP	27	
78016	DEVINE	TX	OVERLAP	36	
78023	HELOTES	TX	OVERLAP	16	
78026	JOURDANTON	TX	OVERLAP	38	
78027	KENDALIA	TX	OVERLAP	35	
78039	LA COSTE	TX	OVERLAP	24	
78050	LEHNING	TX	OVERLAP	27	
78052	LYTLE	TX	OVERLAP	26	
78054	MACDONA	TX	OVERLAP	18	
78056	MICO	TX	OVERLAP	27	
78059	NATALIA	TX	OVERLAP	31	
78063	PIPE CREEK	TX	OVERLAP	34	
78064	PLEASANTON	TX	OVERLAP	35	
78065	POTEE	TX	OVERLAP	30	
78066	RIO MEDINA	TX	OVERLAP	27	
78069	SOMERSET	TX	OVERLAP	21	
78070	SPRING BRANCH	TX	OVERLAP	29	
78073	VON ORRY	TX	OVERLAP	16	
78074	VARING	TX	OVERLAP	39	
78101	ADKINS	TX	OVERLAP	12	
78108	CIBOLO	TX	OVERLAP	14	
78109	CONVERSE	TX	OVERLAP	8	
78112	ELMENDORF	TX	OVERLAP	16	
78114	FLORESVILLE	TX	OVERLAP	28	
78115	GERONIMO	TX	NO OVERLAP	31	
78121	LA VERNIA	TX	OVERLAP	21	
78123	MC QUEENEY	TX	OVERLAP	26	
78124	MARTON	TX	OVERLAP	19	
78130	CANYON LAKE	TX	OVERLAP	25	
78131	NEW BRAUNFELS	TX	OVERLAP	25	
78132	NEW BRAUNFELS	TX	OVERLAP	25	
78133	NEW BRAUNFELS	TX	OVERLAP	25	
78143	PANDORA	TX	NO OVERLAP	38	
78147	POTH	TX	OVERLAP	34	
78148	RANDOLPH AFB	TX	OVERLAP	10	
78150	UNIVERSAL CT	TX	OVERLAP	12	
78152	SAINT HEDWIG	TX	OVERLAP	15	
78153	SASPANCO	TX	OVERLAP	17	
78154	SCHERTZ	TX	OVERLAP	12	
78155	SEGUN	TX	NO OVERLAP	29	
78156	SEGUN	TX	NO OVERLAP	29	
78160	STOCKDALE	TX	NO OVERLAP	33	
78161	SUTHERLAND SPG	TX	OVERLAP	26	

INPATIENT CATCHMENT AREA

0109 - BROOKE AMC (JHMC)-FT SAN HOUSTON

ZIP CODES WITHIN 40 MILES OF FACILITY (CONTINUED)

ZIP CODE	TOWN NAME	STATE	STATUS	DIST	NEW ZIP
78163	WETMORE	TX	OVERLAP	7	
78201	SAN ANTONIO	TX	OVERLAP	5	
78202	SAN ANTONIO	TX	OVERLAP	2	
78203	SAN ANTONIO	TX	OVERLAP	3	
78204	SAN ANTONIO	TX	OVERLAP	4	
78205	SAN ANTONIO	TX	OVERLAP	3	
78206	SAN ANTONIO	TX	OVERLAP	4	
78207	SAN ANTONIO	TX	OVERLAP	5	
78208	SAN ANTONIO	TX	OVERLAP	1	
78209	ALAMO HEIGHTS	TX	OVERLAP	1	
78210	SAN ANTONIO	TX	OVERLAP	5	
78211	SAN ANTONIO	TX	OVERLAP	11	
78212	SAN ANTONIO	TX	OVERLAP	3	
78213	SAN ANTONIO	TX	OVERLAP	6	
78214	SAN ANTONIO	TX	OVERLAP	10	
78215	SAN ANTONIO	TX	OVERLAP	2	
78216	COUNTRYSD PLZ	TX	OVERLAP	6	
78217	SAN ANTONIO	TX	OVERLAP	6	
78218	SAN ANTONIO	TX	OVERLAP	2	
78219	KIRBY	TX	OVERLAP	2	
78220	SAN ANTONIO	TX	OVERLAP	3	
78221	SAN ANTONIO	TX	OVERLAP	9	
78222	SAN ANTONIO	TX	OVERLAP	6	
78223	SAN ANTONIO	TX	OVERLAP	6	
78224	SAN ANTONIO	TX	OVERLAP	12	
78225	SAN ANTONIO	TX	OVERLAP	8	
78226	SAN ANTONIO	TX	OVERLAP	8	
78227	SAN ANTONIO	TX	OVERLAP	10	
78228	SAN ANTONIO	TX	OVERLAP	8	
78229	SAN ANTONIO	TX	OVERLAP	9	
78231	SAN ANTONIO	TX	OVERLAP	10	
78232	SAN ANTONIO	TX	OVERLAP	6	
78233	SAN ANTONIO	TX	OVERLAP	8	
78234	FT SAN HOUSTON	TX	OVERLAP	0	
78236	LACKLAND AFB	TX	OVERLAP	12	
78237	SAN ANTONIO	TX	OVERLAP	9	
78238	OLD MILL	TX	OVERLAP	11	
78239	SAN ANTONIO	TX	OVERLAP	6	
78240	SAN ANTONIO	TX	OVERLAP	10	
78241	KELLY A F B	TX	OVERLAP	10	
78242	SAN ANTONIO	TX	OVERLAP	13	
78243	SAN ANTONIO	TX	OVERLAP	4	
78244	SAN ANTONIO	TX	OVERLAP	9	
78245	SAN ANTONIO	TX	OVERLAP	17	
78246	AIRPORT MAIL	TX	OVERLAP	7	

INPATIENT CATCHMENT AREA

0109 - BROOKE AMC (JMMC)-FT SAN HOUSTON

ZIP CODES WITHIN 40 MILES OF FACILITY (CONTINUED)

ZIP CODE	TOWN NAME	STATE	STATUS	DIST	NEW ZIP
78247	SAN ANTONIO	TX	OVERLAP	9	
78248	SAN ANTONIO	TX	OVERLAP	11	
78249	SAN ANTONIO	TX	OVERLAP	13	
78250	SAN ANTONIO	TX	OVERLAP	13	
78251	SAN ANTONIO	TX	OVERLAP	14	
78252	SAN ANTONIO	TX	OVERLAP	15	
78253	SAN ANTONIO	TX	OVERLAP	9	
78254	SAN ANTONIO	TX	OVERLAP	18	
78255	SAN ANTONIO	TX	OVERLAP	17	
78256	SAN ANTONIO	TX	OVERLAP	14	
78257	SAN ANTONIO	TX	OVERLAP	15	
78258	SAN ANTONIO	TX	OVERLAP	13	
78259	SAN ANTONIO	TX	OVERLAP	9	
78260	SAN ANTONIO	TX	OVERLAP	18	
78261	SAN ANTONIO	TX	OVERLAP	16	
78262	SAN ANTONIO	TX	OVERLAP	6	
78263	SAN ANTONIO	TX	OVERLAP	9	
78264	SAN ANTONIO	TX	OVERLAP	18	
78265	SAN ANTONIO	TX	OVERLAP	4	
78266	SAN ANTONIO	TX	OVERLAP	5	
78268	LEON VALLEY	TX	OVERLAP	11	
78269	SAN ANTONIO	TX	OVERLAP	4	
78270	SAN ANTONIO	TX	OVERLAP	6	
78275	SAN ANTONIO	TX	OVERLAP	3	
78278	SAN ANTONIO	TX	OVERLAP	2	
78279	SAN ANTONIO	TX	OVERLAP	6	
78280	OLD HILL	TX	OVERLAP	11	
78283	SAN ANTONIO	TX	OVERLAP	4	
78284	SAN ANTONIO	TX	OVERLAP	4	
78285	SAN ANTONIO	TX	OVERLAP	4	
78286	SAN ANTONIO	TX	OVERLAP	4	
78287	SAN ANTONIO	TX	OVERLAP	5	
78288	SAN ANTONIO	TX	OVERLAP	4	
78289	SAN ANTONIO	TX	OVERLAP	5	
78290	SAN ANTONIO	TX	OVERLAP	5	
78291	SAN ANTONIO	TX	OVERLAP	4	
78292	SAN ANTONIO	TX	OVERLAP	4	
78293	SAN ANTONIO	TX	OVERLAP	4	
78294	SAN ANTONIO	TX	OVERLAP	4	
78295	SAN ANTONIO	TX	OVERLAP	4	
78296	SAN ANTONIO	TX	OVERLAP	4	
78297	SAN ANTONIO	TX	OVERLAP	4	
78298	SAN ANTONIO	TX	OVERLAP	4	
78299	SAN ANTONIO	TX	OVERLAP	4	
78423	FISCHER	TX	OVERLAP	36	
78438	KINGSBURY	TX	OVERLAP	39	

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POPULATION BY ZIP CODE
WHMC AND BAMC CATCHMENT AREAS COMBINED

ZIP CODE	A/D	DEP	A/D	RET	DEP/RET	OTH	TOTAL
78002	9		41	72	101	17	240
3	6		2	111	115	34	268
4	0		3	2	1	2	8
5	3		5	4	4	1	17
6	10		59	411	501	66	1047
9	14		81	106	142	36	379
11	2		1	6	7	3	19
16	8		33	103	134	30	308
23	5		41	131	152	23	352
26	3		4	23	43	11	84
27	0		0	2	2	0	4
39	2		11	36	38	8	95
50	2		4	9	13	1	29
52	7		24	75	108	15	229
54	2		4	5	3	3	17
56	0		0	13	12	3	28
67	0		1	8	9	7	25
59	6		24	57	61	8	156
63	7		20	157	159	28	371
64	16		17	91	127	29	280
65	10		14	42	47	15	128
66	1		5	7	5	2	20
69	3		7	51	64	20	145
70	0		12	79	99	26	216
73	7		23	61	89	19	199
74	0		0	1	1	1	3
78101	3		4	83	92	17	199
108	15		149	331	470	74	1039
109	89		940	713	1233	135	3110
112	5		9	53	67	9	143
114	14		59	108	130	28	339
115	1		8	8	11	0	28
121	9		26	77	102	17	231
123	4		5	86	102	26	223
124	0		27	121	154	28	339
130	51		80	539	622	210	1502
131	0		1	25	23	2	51
132	7		17	146	169	22	361
133	8		14	278	286	61	647
143	0		0	0	1	0	1
147	2		4	7	5	7	25
148/50	4555		4789	1432	2088	326	13190
152	0		5	32	45	0	82
154	46		546	899	1292	170	2953
155	25		80	485	593	121	1304
156	0		2	19	24	4	49
160	5		1	22	23	8	59
161	0		4	10	8	2	24
163	2		16	89	117	11	235
201	64		164	402	433	248	1311

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POPULATION BY ZIP CODE
WHMC AND BAMC CATCHMENT AREAS COMBINED

ZIP CODE	A/D	DEP	A/D	RET	DEP/RET	OTH	TOTAL
202	12		25	140	165	77	419
203	6		22	56	86	29	199
204	10		30	61	69	28	198
205	10		14	25	12	9	70
206	0		0	6	1	1	8
207	94		128	197	229	108	756
208	11		14	71	69	38	203
209	152		461	1377	1286	796	4072
210	51		112	355	394	194	1106
211	58		87	146	197	88	576
212	44		121	285	305	179	934
213	80		165	673	770	295	1983
214	44		73	153	185	110	565
215	3		15	16	18	4	56
216	69		206	721	774	314	2084
217	357		948	1053	1281	384	4023
218	104		627	1499	1878	578	4686
219	105		216	545	826	180	1872
220	39		112	443	581	218	1393
221	68		113	356	451	199	1187
222	51		188	358	548	121	1266
223	101		317	683	829	403	2333
224	34		92	135	206	56	523
225	17		47	97	124	67	352
226	32		782	104	138	45	1101
227	162		1359	2328	2950	725	7524
228	125		284	647	809	333	2198
229	57		346	475	485	187	1550
230	63		314	826	968	233	2404
231	18		115	226	284	76	719
232	122		526	912	1196	193	2949
233	139		1222	1655	2531	392	5939
234	9446		9222	63	113	201	19045
235	918		653	16	42	2	1631
236	14691		4128	25	69	40	18953
237	83		144	218	292	135	872
238	98		506	674	895	173	2346
239	110		888	2266	2756	522	6542
240	116		761	787	1023	226	2913
241/43	4655		1159	29	54	3	5900
242	107		680	1055	1543	300	3685
244	143		1287	716	1234	146	3526
245	216		2596	1753	2774	418	7757
246	0		0	3	2	0	5
247	225		961	879	1418	198	3681
248	13		99	123	169	15	419
249	69		596	570	873	110	2218
250	254		3467	1461	2532	368	8082
251	109		1376	626	1025	132	3268
252	1		4	13	18	3	39

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POPULATION BY ZIP CODE
WHMC AND BAMC CATCHMENT AREAS COMBINED

ZIP CODE	A/D	DEP	A/D	RET	DEP/RET	OTH	TOTAL
253	26		356	192	274	31	879
254	2		9	32	48	6	97
255	1		12	89	115	8	225
256	6		25	24	34	4	93
257	4		4	42	45	18	113
258	18		62	89	112	15	296
259	35		218	142	232	22	649
260	3		7	47	50	9	116
261	0		1	12	12	0	25
262	0		1	0	1	0	2
263	10		25	42	44	11	132
264	3		11	40	55	10	119
265	2		4	35	33	4	78
266	11		26	133	137	3	310
268	1		1	17	23	4	46
269	2		4	16	17	1	40
270	0		2	10	14	1	27
278	0		3	8	4	1	16
279	1		2	13	13	1	30
280	4		14	22	24	9	73
283	0		0	5	3	0	8
284	6		4	4	1	2	17
285	12		15	2	2	6	37
286	8		6	4	2	1	21
287	0		0	1	0	0	1
288	1		1	1	3	3	9
291	4		4	14	9	2	33
292	1		5	12	11	1	30
293	1		2	7	7	4	21
294	1		5	4	2	0	12
295	3		1	5	1	0	10
296	0		1	3	0	0	4
297	54		79	3	1	0	137
298	0		0	3	3	0	6
299	0		0	1	2	1	4
623	0		0	4	3	2	9
638	0		0	7	9	2	18
850	0		0	4	2	0	6
861	15		29	101	133	33	311
886	0		0	1	1	0	2
NO ZIP	600		0	0	0	2196	2796
TOTAL	39364		45933	36720	49086	13997	185100

	A/D on base	a/d off base	total	dep on base	dep off base	total
Brooks	256	2649	2905	70	693	763
FSH	5369	4077	9446	934	8288	9222

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POPULATION BY ZIP CODE
WHMC AND BAMC CATCHMENT AREAS COMBINED

ZIP CODE	A/D	DEP A/D	RET	DEP/RET	OTH	TOTAL
Kelly	360	4295	4655	869	290	1159
Lackland	6346 *	8346	14691	1829	2229	4128
Randolph	1278	3277	4555	3839	950	4789

Note: these on base amounts came from the SGA at each base except FS
The totals come from the data above. The off base should then be tot
FSH data came from their managed care office. They weren't sure abou
and dorm dwellers but thought about 5000.

* Includes: 740 in Base housing, 606 in the barracks, and
5,000 (monthly Avg) BMT students.

POPULATION BY ZIP CODE

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WHMC AND BANC CATCHMENT AREAS COMBINED
REDISTRIBUTION WORKSHEET

ZIP CODE	A/D	A/D	A/D	BEFORE	%	DEP A/D	DEP A/D	REDISTRIBUTION WORKSHEET								OTH	TOTAL
	RET	A/D				AFTER	AFTER	DEP A/D	BEFORE	%	RET	%	DEP/RET	%			
78002	55	49	9	0.001	68	61	41	0.001	72	0.002	101	0.002	17	240			
3	71	0	0	0	33	3	2	0.000	111	0.003	115	0.002	34	262			
4	1	0	0	0	3	4	3	0.000	2	0.000	1	0.000	2	8			
5	6	16	3	0.000	6	7	5	0.000	4	0.000	4	0.000	1	17			
6	275	54	10	0.001	193	87	59	0.002	411	0.011	501	0.010	66	1047			
9	82	76	14	0.002	119	120	81	0.003	106	0.003	142	0.003	36	379			
11	6	11	2	0.000	3	1	1	0.000	6	0.000	7	0.000	3	19			
16	74	44	8	0.001	69	49	33	0.001	103	0.002	134	0.002	30	308			
23	89	27	5	0.000	82	61	41	0.001	131	0.003	152	0.003	23	352			
26	18	16	3	0.000	15	6	4	0.000	23	0.000	43	0.000	11	84			
27	1	0	0	0	1	0	0	0	2	0.000	2	0.000	0	4			
39	25	11	2	0.000	21	16	11	0.000	36	0.001	38	0.000	8	95			
50	8	11	2	0.000	7	6	4	0.000	9	0.000	13	0.000	1	29			
52	55	38	7	0.001	53	36	24	0.000	75	0.002	108	0.002	15	229			
54	5	11	2	0.000	5	6	4	0.000	5	0.000	3	0.000	3	17			
56	8	0	0	0	3	0	0	0	13	0.000	12	0.000	3	28			
67	5	0	0	0	3	1	1	0.000	8	0.000	9	0.000	7	25			
59	43	33	6	0.001	40	36	24	0.000	57	0.001	61	0.001	8	156			
63	108	38	7	0.001	62	30	20	0.000	157	0.004	159	0.003	28	371			
64	75	87	16	0.003	51	25	17	0.000	91	0.002	127	0.002	29	280			
65	37	54	10	0.001	27	21	14	0.000	42	0.001	47	0.001	15	128			
66	6	5	1	0.000	6	7	5	0.000	7	0.000	5	0.000	2	20			
69	36	16	3	0.000	24	10	7	0.000	51	0.001	64	0.001	20	145			
70	51	0	0	0	38	18	12	0.000	79	0.002	99	0.002	26	216			
73	46	38	7	0.001	47	34	23	0.000	61	0.001	89	0.001	19	199			
74	1	0	0	0	0	0	0	0	1	0.000	1	0.000	1	3			
78101	56	16	3	0.000	29	6	4	0.000	83	0.002	92	0.001	17	199			
108	228	82	15	0.002	274	220	149	0.005	331	0.009	470	0.010	74	1039			
109	548	485	89	0.017	1269	1390	940	0.036	713	0.020	1233	0.026	135	3110			
112	39	27	5	0.000	27	13	9	0.000	53	0.001	67	0.001	9	143			
114	84	76	14	0.002	94	87	59	0.002	108	0.003	130	0.002	28	339			
115	6	5	1	0.000	11	12	8	0.000	8	0.000	11	0.000	0	28			
121	59	49	9	0.001	53	38	26	0.001	77	0.002	102	0.002	17	231			
123	59	22	4	0.000	32	7	5	0.000	86	0.002	102	0.002	26	223			
124	87	49	9	0.001	68	40	27	0.001	121	0.003	154	0.003	28	339			
130	398	278	51	0.010	246	118	80	0.003	539	0.015	622	0.013	210	1502			
131	16	0	0	0	7	1	1	0.000	25	0.000	23	0.000	2	51			
132	101	38	7	0.001	62	25	17	0.000	146	0.004	169	0.003	22	361			
133	187	44	8	0.001	90	21	14	0.000	278	0.007	286	0.006	61	647			
143	0	0	0	0	0	0	0	0	0	0	1	0.000	0	1			
147	7	11	2	0.000	5	6	4	0.000	7	0.000	5	0.000	7	25			
148/50																	
152	21	0	0	0	17	7	5	0.000	32	0.000	45	0.000	0	82			
154	625	251	46	0.009	890	808	546	0.021	899	0.025	1292	0.027	170	2953			

POPULATION BY ZIP CODE

1 OCT 92

WEMC AND BANC CATCHMENT AREAS COMBINED

REDISTRIBUTION WORKSHEET

ZIP CODE	A/D	A/D	A/D	%	DEP	A/D	DEP	A/D	REDISTRIBUTION WORKSHEET							
	AFTER	AFTER			BEFORE	%	RET	%	DEP/RET	%	OTH	TOTAL				
155	337	136	25	0.004	238	118	80	0.003	485	0.013	593	0.012	121	1304		
156	12	0	0	0	8	3	2	0.000	19	0.000	24	0.000	4	49		
160	19	27	5	0.000	7	1	1	0.000	22	0.000	23	0.000	8	59		
161	6	0	0	0	6	6	4	0.000	10	0.000	8	0.000	2	24		
163	59	11	2	0.000	47	24	16	0.000	89	0.002	117	0.002	11	235		
201	323	349	64	0.012	279	243	164	0.006	402	0.011	433	0.009	248	1311		
202	102	65	12	0.002	69	37	25	0.000	140	0.003	165	0.003	77	419		
203	42	33	6	0.001	45	33	22	0.000	56	0.001	86	0.001	29	199		
204	49	54	10	0.001	48	44	30	0.001	61	0.001	69	0.001	28	198		
205	26	54	10	0.001	17	21	14	0.000	25	0.000	12	0.000	9	70		
206	4	0	0	0	0	0	0	0	6	0.000	1	0.000	1	8		
207	221	512	94	0.018	189	189	128	0.004	197	0.005	229	0.004	108	756		
208	57	60	11	0.002	32	21	14	0.000	71	0.002	69	0.001	38	203		
209	1039	828	152	0.029	804	682	461	0.017	1377	0.039	1286	0.027	796	4072		
210	280	278	51	0.010	217	166	112	0.004	355	0.010	394	0.008	194	1106		
211	152	316	58	0.011	139	129	87	0.003	146	0.004	197	0.004	88	576		
212	228	240	44	0.008	202	179	121	0.004	285	0.008	305	0.006	179	934		
213	513	436	80	0.015	370	244	165	0.006	673	0.019	770	0.016	295	1983		
214	143	240	44	0.008	122	108	73	0.002	153	0.004	185	0.003	110	565		
215	13	16	3	0.000	20	22	15	0.000	16	0.000	18	0.000	4	56		
216	533	376	69	0.013	412	305	206	0.007	721	0.020	774	0.016	314	2084		
217	1035	1044	357	0.070	1289	1402	948	0.036	1053	0.029	1281	0.027	384	4023		
218	1069	566	104	0.020	1127	927	627	0.024	1499	0.042	1878	0.040	578	4686		
219	456	572	105	0.020	436	320	216	0.008	545	0.015	826	0.017	180	1872		
220	324	212	39	0.007	267	166	112	0.004	443	0.012	581	0.012	218	1393		
221	297	370	68	0.013	233	167	113	0.004	356	0.010	451	0.009	199	1187		
222	282	278	51	0.010	334	278	188	0.007	358	0.010	548	0.011	121	1266		
223	541	550	101	0.019	538	469	317	0.012	683	0.019	829	0.017	403	2333		
224	121	185	34	0.006	147	136	92	0.003	135	0.003	206	0.004	56	523		
225	79	93	17	0.003	80	70	47	0.001	97	0.002	124	0.002	67	352		
226	99	174	32	0.006	819	1157	782	0.030	104	0.002	138	0.002	45	1101		
227	1661	882	162	0.031	2145	2010	1359	0.052	2328	0.066	2950	0.063	725	7524		
228	542	681	125	0.024	500	420	284	0.010	647	0.018	809	0.017	333	2198		
229	363	310	57	0.011	475	512	346	0.013	475	0.013	485	0.010	187	1550		
230	595	343	63	0.012	572	464	314	0.012	826	0.023	968	0.020	233	2404		
231	164	98	18	0.003	191	170	115	0.004	226	0.006	284	0.006	76	719		
232	709	664	122	0.023	845	778	526	0.020	912	0.025	1196	0.025	193	2949		
233	1205	757	139	0.027	1896	1808	1222	0.047	1655	0.047	2531	0.054	392	5939		
234																
235																
236																
237	223	452	83	0.016	222	213	144	0.005	218	0.006	292	0.006	135	872		
238	532	534	98	0.019	745	748	506	0.019	674	0.019	895	0.019	173	2346		
239	1570	599	110	0.021	1622	1314	888	0.034	2266	0.064	2756	0.058	522	6542		

241/43

POPULATION BY ZIP CODE

1 OCT 92

WHMC AND BANC CATCHMENT AREAS COMBINED
REDISTRIBUTION WORKSHEET

ZIP CODE	A/D	A/D	A/D BEFORE	%	DEP A/D	DEP A/D	REDISTRIBUTION WORKSHEET									TOTAL
	AFTER	AFTER			AFTER	AFTER	DEP A/D	BEFORE	%	RET	%	DEP/RET	%	OTH		
	RET	A/D			DEP RET	DEP A/D										
240	623	632	116	0.022	1034	1126	761	0.029	787	0.022	1023	0.021	226	2913		
242	787	583	107	0.021	1091	1006	680	0.026	1055	0.030	1543	0.033	300	3685		
244	604	779	143	0.028	1616	1904	1287	0.049	716	0.020	1234	0.026	146	3526		
245	1345	1176	216	0.042	3335	3840	2596	0.099	1753	0.049	2774	0.059	418	7757		
246	2	0	0	0	1	0	0	0	3	0.000	2	0.000	0	5		
247	791	1225	225	0.044	1339	1421	961	0.036	879	0.025	1418	0.030	198	3681		
248	92	71	13	0.002	144	146	99	0.003	123	0.003	169	0.003	15	419		
249	436	376	69	0.013	829	882	596	0.022	570	0.016	873	0.018	110	2218		
250	1195	1383	254	0.049	4142	5128	3467	0.133	1461	0.041	2532	0.054	368	8082		
251	512	594	109	0.021	1649	2035	1376	0.052	626	0.017	1025	0.021	132	3268		
252	9	5	1	0.000	9	6	4	0.000	13	0.000	18	0.000	3	39		
253	150	142	26	0.005	429	527	356	0.013	192	0.005	274	0.005	31	879		
254	23	11	2	0.000	22	13	9	0.000	32	0.000	48	0.001	6	97		
255	58	5	1	0.000	43	18	12	0.000	89	0.002	115	0.002	8	225		
256	21	33	6	0.001	34	37	25	0.000	24	0.000	34	0.000	4	93		
257	31	22	4	0.000	16	6	4	0.000	42	0.001	45	0.000	18	113		
258	75	98	18	0.003	92	92	62	0.002	89	0.002	112	0.002	15	296		
259	126	191	35	0.006	280	322	218	0.008	142	0.004	232	0.004	22	649		
260	33	16	3	0.000	20	10	7	0.000	47	0.001	50	0.001	9	116		
261	8	0	0	0	4	1	1	0.000	12	0.000	12	0.000	0	25		
262	0	0	0	0	1	1	1	0.000	0	0	1	0.000	0	2		
263	37	54	10	0.001	37	37	25	0.000	42	0.001	44	0.000	11	132		
264	29	16	3	0.000	26	16	11	0.000	40	0.001	55	0.001	10	119		
265	25	11	2	0.000	13	6	4	0.000	35	0.000	33	0.000	4	78		
266	97	60	11	0.002	63	38	26	0.001	133	0.003	137	0.002	3	310		
268	12	5	1	0.000	7	1	1	0.000	17	0.000	23	0.000	4	46		
269	12	11	2	0.000	9	6	4	0.000	16	0.000	17	0.000	1	40		
270	6	0	0	0	6	3	2	0.000	10	0.000	14	0.000	1	27		
278	5	0	0	0	4	4	3	0.000	8	0.000	4	0.000	1	16		
279	9	5	1	0.000	5	3	2	0.000	13	0.000	13	0.000	1	30		
280	18	22	4	0.000	20	21	14	0.000	22	0.000	24	0.000	9	73		
283	3	0	0	0	1	0	0	0	5	0.000	3	0.000	0	8		
284	9	33	6	0.001	4	6	4	0.000	4	0.000	1	0.000	2	17		
285	13	65	12	0.002	16	22	15	0.000	2	0.000	2	0.000	6	37		
286	11	44	8	0.001	7	9	6	0.000	4	0.000	2	0.000	1	21		
287	1	0	0	0	0	0	0	0	1	0.000	0	0	0	1		
288	2	5	1	0.000	2	1	1	0.000	1	0.000	3	0.000	3	9		
291	13	22	4	0.000	6	6	4	0.000	14	0.000	9	0.000	2	33		
292	9	5	1	0.000	8	7	5	0.000	12	0.000	11	0.000	1	30		
293	6	5	1	0.000	4	3	2	0.000	7	0.000	7	0.000	4	21		
294	4	5	1	0.000	6	7	5	0.000	4	0.000	2	0.000	0	12		
295	6	16	3	0.000	1	1	1	0.000	3	0.000	1	0.000	0	10		
296	2	0	0	0	1	1	1	0.000	3	0.000	0	0	0	4		
297	56	294	54	0.010	79	117	79	0.003	3	0.000	1	0.000	0	137		
298	2	0	0	0	1	0	0	0	3	0.000	3	0.000	0	6		

POPULATION BY ZIP CODE

1 OCT 92

WEMC AND BANC CATCHMENT AREAS COMBINED

REDISTRIBUTION WORKSHEET

ZIP CODE	A/D AFTER RET	A/D AFTER A/D	A/D BEFORE	%	DEP AFTER RET	A/D AFTER A/D	DEP AFTER RET	A/D BEFORE	%	RET	%	DEP/RET	%	OTH	TOTAL
299	1	0	0	0	1	0	0	0	0	1	0.000	2	0.000	1	4
623	3	0	0	0	1	0	0	0	0	4	0.000	3	0.000	2	9
638	5	0	0	0	2	0	0	0	0	7	0.000	9	0.000	2	18
850	3	0	0	0	1	0	0	0	0	4	0.000	2	0.000	0	6
861	80	82	15	0.002	64	43	29	0.001	101	0.002	133	0.002	33	311	
886	1	0	0	0	0	0	0	0	0	1	0.000	1	0.000	0	2
NO ZIP	600	3268	600	0.117	0	0	0	0	0	0	0	0	0	2196	2796
TOTAL	27736	27736	5093	1	38432	38432	25982	1	35155	1	46720	1	13425	126375	

	A/D on base	a/d off base	total	dep on base	dep off base	total
Brooks	256	2649	2905	70	693	763
FSH	5369	4077	9446	934	8288	9222
Kelly	360	4295	4655	869	290	1159
Lackland	* 6346	8345	14691	1829	2229	4128
Randolph	1278	3277	4555	3839	950	4789
TOTALS	13609	22643	36252	7541	12450	20061

Note: these on base amounts came from the SGA at each base except FSH.

The totals come from the data above. The off base should then be tot - on base.

FSH data came from their managed care office. They weren't sure about A/D students and dorm dwellers but thought about 5000.

Includes: 740 in base housing, 660 in the barracks, and approx. 5,000 BMT students.

21 OCT 92

WHMC AND BAMC CATCHMENT AREAS COMBINED
After A/D Redistribution

CODE	A/D	DEP	A/D	RET	DEP/RET	OTH	TOTAL
8002	51		68	72	101	17	309
3	65		32	111	115	34	358
4	1		3	2	1	2	9
5	5		6	4	4	1	20
6	251		191	411	501	66	1421
9	76		119	106	142	36	479
11	6		3	6	7	3	24
16	69		68	103	134	30	404
23	82		81	131	152	23	469
26	17		15	23	43	11	109
27	1		1	2	2	0	6
39	23		21	36	38	8	126
50	7		7	9	13	1	38
52	51		53	75	108	15	302
54	5		5	5	3	3	21
56	8		3	13	12	3	39
67	5		3	8	9	7	32
59	39		40	57	61	8	206
63	99		62	157	159	28	505
64	69		51	91	127	29	367
65	35		26	42	47	15	165
66	5		6	7	5	2	25
69	33		24	51	64	20	192
70	46		38	79	99	26	289
73	43		47	61	89	19	258
74	1		0	1	1	1	4
8101	52		28	83	92	17	272
108	209		273	331	470	74	1358
109	508		1266	713	1233	135	3855
112	36		27	53	67	9	192
114	77		93	108	130	28	437
115	6		11	8	11	0	36
121	54		53	77	102	17	303
123	55		32	86	102	26	300
124	80		68	121	154	28	451
130	368		244	539	622	210	1983
131	15		7	25	23	2	72
132	93		62	146	169	22	491
133	171		90	278	286	61	886
143	0		0	0	1	0	1
147	6		5	7	5	7	30
8/50	1278		3839	1432	2088	326	8963
152	19		17	32	45	0	113
154	574		887	899	1292	170	3822
155	310		237	485	593	121	1746
156	11		8	19	24	4	67
160	18		7	22	23	8	78
161	6		6	10	8	2	32
163	54		47	89	117	11	318
201	300		278	402	433	248	1662
202	94		69	140	165	77	545
203	39		45	56	86	29	255
204	46		48	61	69	28	252

21 OCT 92

WHMC AND BAMC CATCHMENT AREAS COMBINED
After A/D Redistribution

CODE	A/D	DEP	A/D	RET	DEP/RET	OTH	TOTAL
205	25		17	25	12	9	88
206	4		0	6	1	1	12
207	210		188	197	229	108	932
208	53		32	71	69	38	263
209	961		801	1377	1286	796	5221
210	260		216	355	394	194	1419
211	144		139	146	197	88	714
212	211		202	285	305	179	1182
213	475		368	673	770	295	2582
214	134		122	153	185	110	704
215	12		20	16	18	4	70
216	493		410	721	774	314	2712
217	976		1286	1053	1281	384	4980
218	985		1123	1499	1878	578	6063
219	425		434	545	826	180	2410
220	299		265	443	581	218	1807
221	277		232	356	451	199	1515
222	261		333	358	548	121	1621
223	502		536	683	829	403	2953
224	113		146	135	206	56	657
225	74		80	97	124	67	442
226	93		818	104	138	45	1199
227	1530		2138	2328	2950	725	9671
228	505		498	647	809	333	2792
229	336		474	475	485	187	1957
230	548		570	826	968	233	3145
231	151		190	226	284	76	927
232	658		842	912	1196	193	3801
233	1111		1891	1655	2531	392	7580
234	5369		934	63	113	201	6680
235	256		70	16	42	2	386
236	6346		1829	25	69	40	8309
237	211		221	218	292	135	1077
238	494		742	674	895	173	2978
239	1441		1616	2266	2756	522	8601
240	578		1031	787	1023	226	3645
1/43	360		869	29	54	3	1315
242	727		1088	1055	1543	300	4712
244	564		1613	716	1234	146	4273
245	1246		3329	1753	2774	418	9520
246	2		1	3	2	0	7
247	741		1336	879	1418	198	4572
248	85		144	123	169	15	536
249	404		827	570	873	110	2783
250	1112		4136	1461	2532	368	9609
251	477		1647	626	1025	132	3907
252	9		9	13	18	3	51
253	139		428	192	274	31	1064
254	21		22	32	48	6	128
255	53		42	89	115	8	308
256	20		34	24	34	4	116
257	29		16	42	45	18	150
258	70		92	89	112	15	378

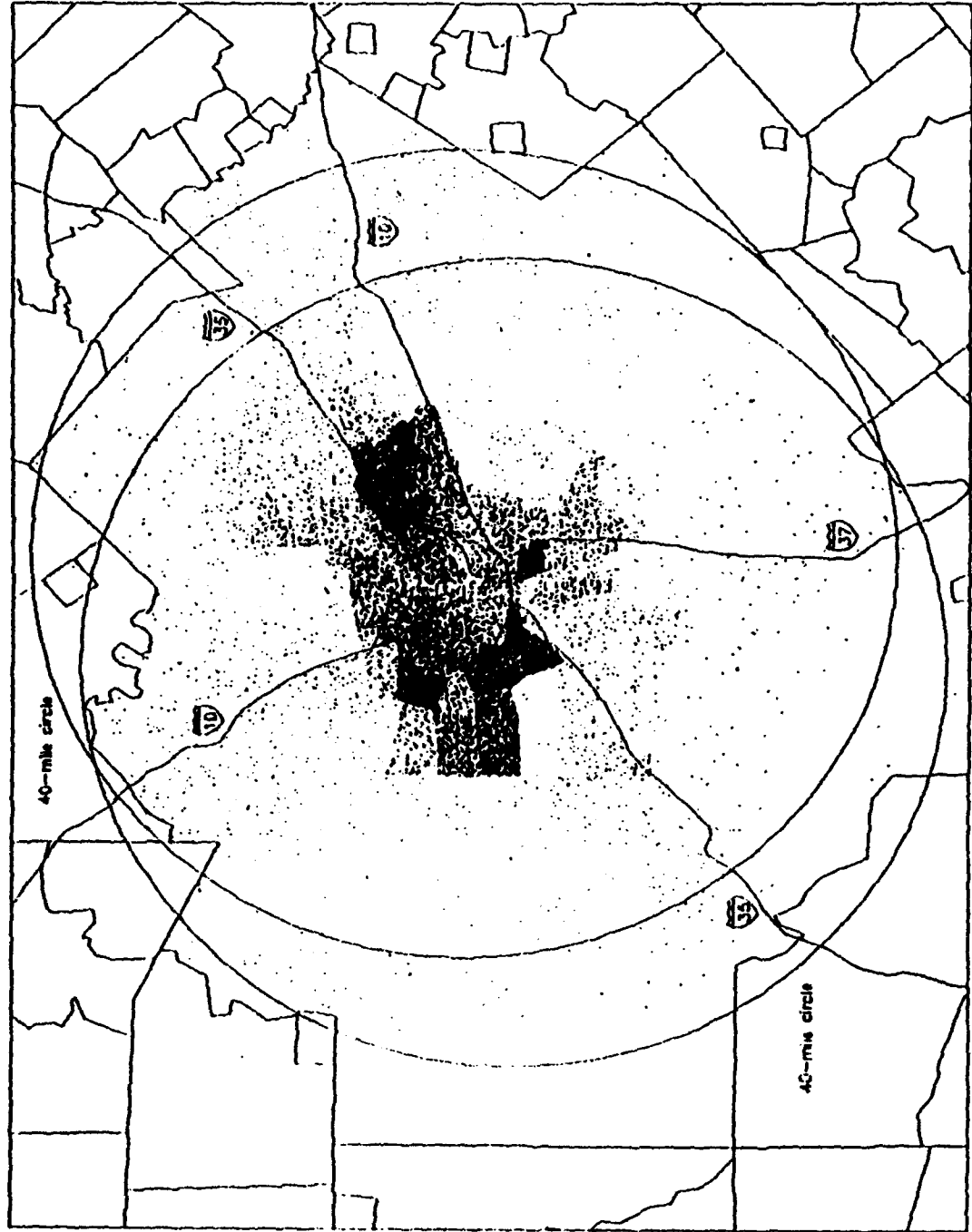
21 OCT 92

WHMC AND BAMC CATCHMENT AREAS COMBINED
After A/D Redistribution

ZIP CODE	A/D	DEP	A/D	RET	DEP/RET	OTH	TOTAL
259	118		279	142	232	22	794
260	31		20	47	50	9	157
261	7		4	12	12	0	35
262	0		1	0	1	0	2
263	35		37	42	44	11	168
264	27		26	40	55	10	157
265	23		13	35	33	4	107
266	89		62	133	137	3	424
268	11		7	17	23	4	62
269	11		8	16	17	1	54
270	6		6	10	14	1	37
278	5		4	8	4	1	22
279	9		5	13	13	1	41
280	17		20	22	24	9	92
283	3		1	5	3	0	12
284	8		4	4	1	2	20
285	13		16	2	2	6	39
286	10		7	4	2	1	24
287	1		0	1	0	0	2
288	2		2	1	3	3	10
291	12		6	14	9	2	44
292	8		8	12	11	1	40
293	5		4	7	7	4	27
294	3		6	4	2	0	15
295	6		1	5	1	0	13
296	2		1	3	0	0	6
297	56		79	3	1	0	139
298	2		1	3	3	0	9
299	1		1	1	2	1	6
623	2		1	4	3	2	12
638	4		2	7	9	2	24
850	2		1	4	2	0	9
861	74		64	101	133	33	405
886	1		0	1	1	0	3
NO ZIP	606		70	0	0	2196	2872
TOTAL	39364		45933	36720	49086	13997	185100

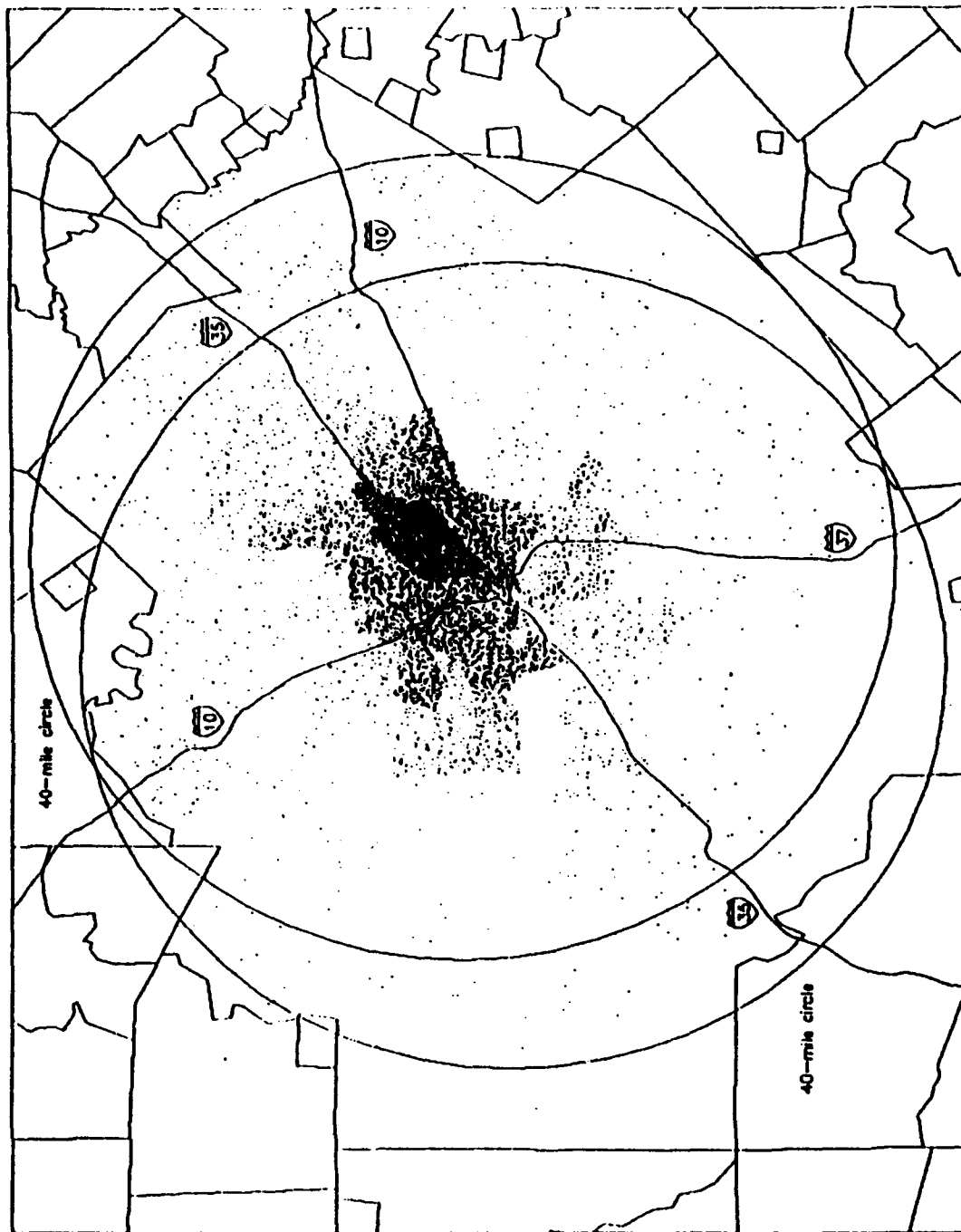
OPR: CAPT KEN BONNER, 5141

DISTRIBUTION OF AIR FORCE BENEFICIARIES IN THE SAN ANTONIO SERVICE AREA
(each dot = 3 beneficiaries)



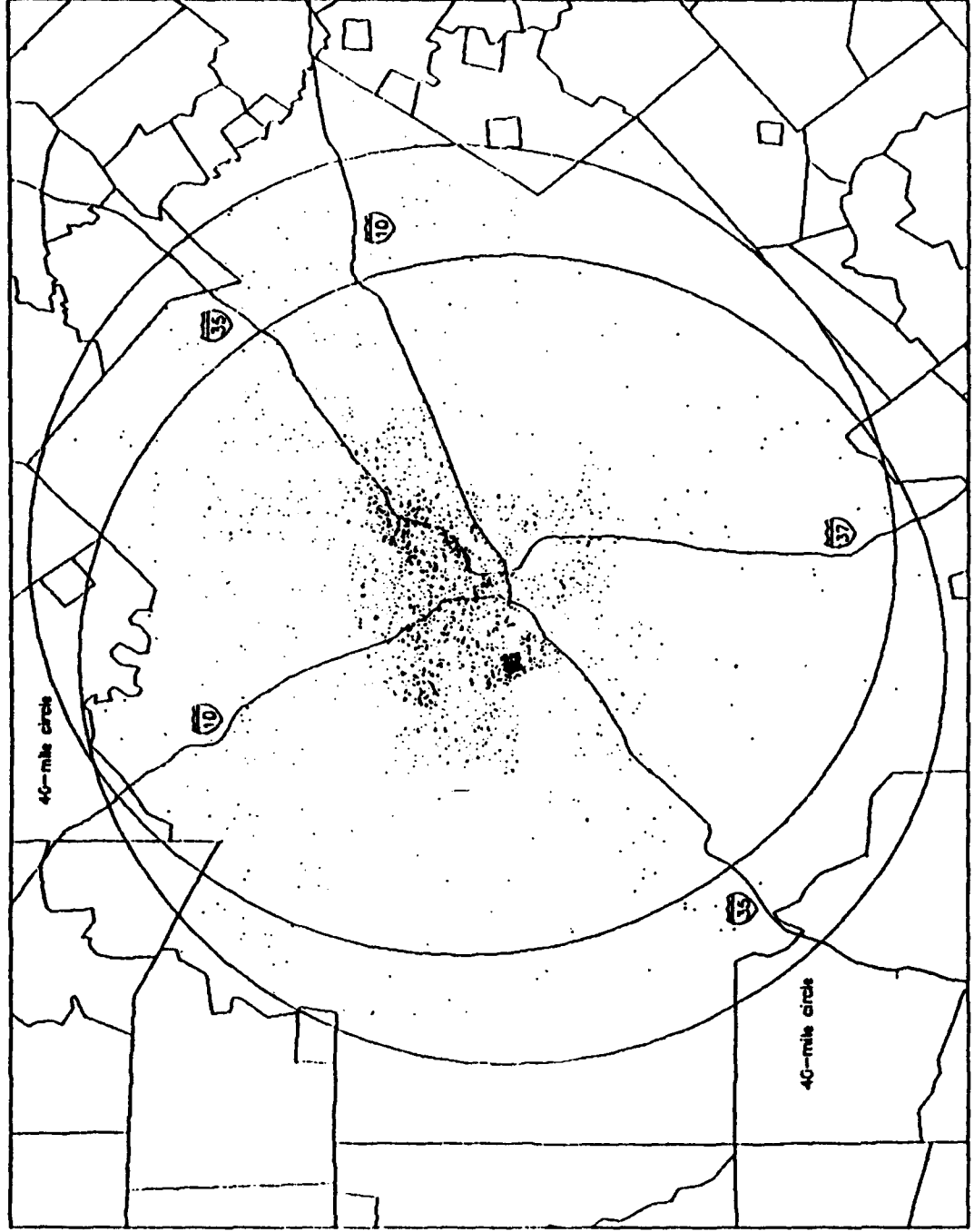
SOURCE: DMIS/STRATEGIC MAPPING

DISTRIBUTION OF ARMY BENEFICIARIES IN THE SAN ANTONIO SERVICE AREA
(each dot = 3 beneficiaries)



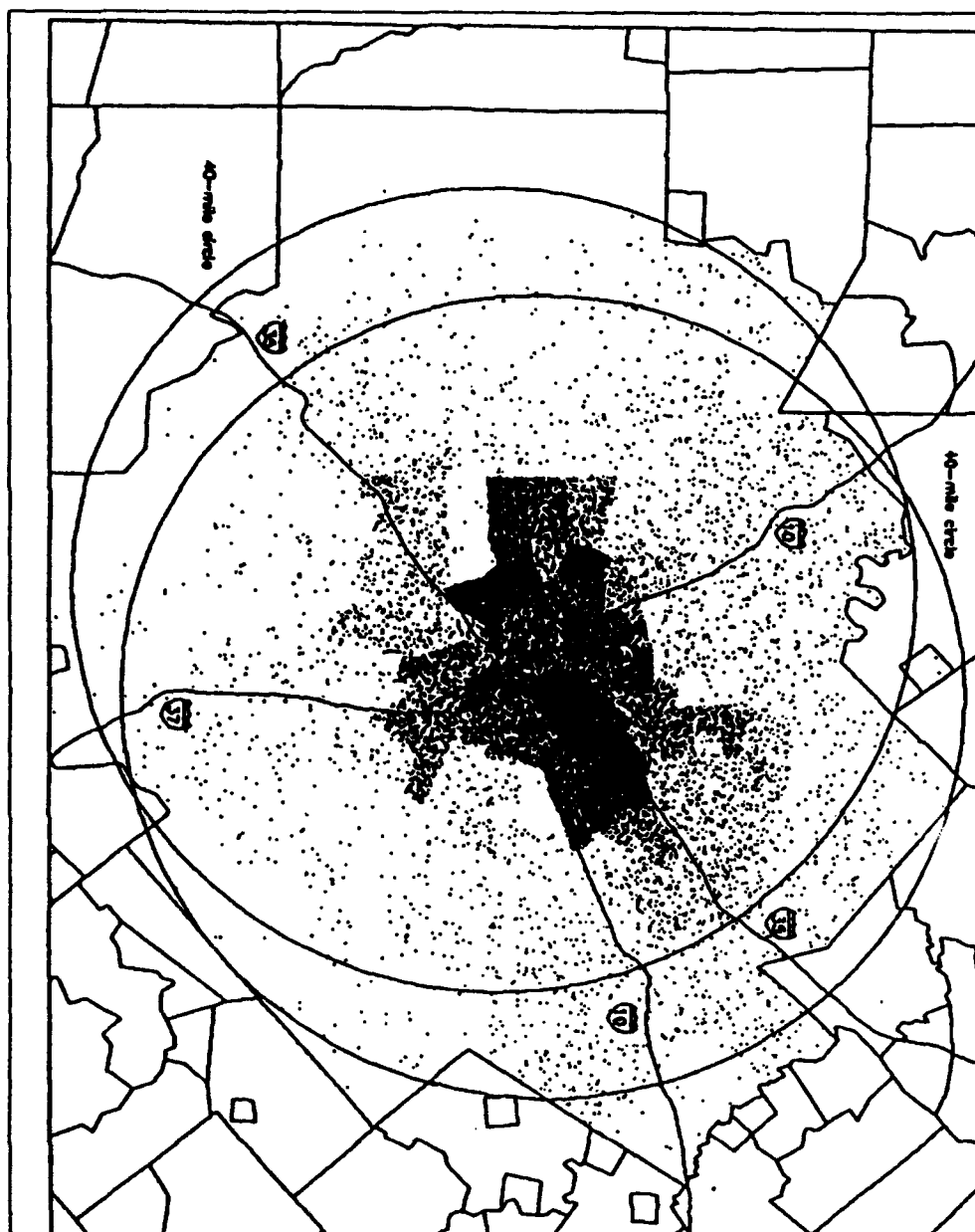
SOURCE: DMIS/STRATEGIC MAPPING

DISTRIBUTION OF NAVY AND MARINE CORPS BENEFICIARIES IN THE SAN ANTONIO SERVICE AREA
(each dot = 3 beneficiaries)



SOURCE: DMIS/STRATEGIC MAPPING

Distribution of Medically Eligible Beneficiaries



APPENDIX 17

SOURCE: RAPS, Version 4.25 (direct care visits are for hospitals plus clinics in their catchment area).

FY89 DIRECT CARE OUTPATIENT UTILIZATION RATES
BY CLINICAL SERVICE AND CATCHMENT AREA FOR ACTIVE
DUTY RESIDING IN THE SAN ANTONIO SERVICE AREA

CLINICAL SERVICE	BROOKE AMC	WILFORD HALL USAF MEDICAL CENTER	TOTAL SAN ANTONIO SERVICE AREA
MED/PC GROUP			
VISITS/CAPITA	7.320	8.004	7.664
ALLERGY			
VISITS/CAPITA	0.468	0.607	0.538
CARDIOLOGY			
VISITS/CAPITA	0.169	0.294	0.232
DERMATOLOGY			
VISITS/CAPITA	0.651	1.238	0.946
NEUROLOGY			
VISITS/CAPITA	0.164	0.415	0.290
EMERGENCY			
VISITS/CAPITA	0.590	1.422	1.008
GENERAL SURGERY			
VISITS/CAPITA	0.186	0.602	0.395
ORTHOPEDIC SURGERY			
VISITS/CAPITA	0.887	1.786	1.339
OPHTHALMOLOGY			
VISITS/CAPITA	0.108	0.394	0.252
OTOLARYNGOLOGY			
VISITS/CAPITA	0.132	0.729	0.433
UROLOGY			
VISITS/CAPITA	0.140	0.325	0.233
GYNECOLOGY			
VISITS/CAPITA	1.699	5.189	3.444
OBSTETRICS			
VISITS/CAPITA	0.874	1.323	1.100
PSYCHIATRY			
VISITS/CAPITA	0.851	4.474	2.674
OPTOMETRY			
VISITS/CAPITA	0.631	1.583	1.110
ALL CLINICAL AREAS			
VISITS/CAPITA	12.840	23.234	18.068

SOURCE: RAPS UTILIZATION RATE MODULE, VERSION 4.25.

**FY89 OUTPATIENT UTILIZATION RATES BY CLINICAL
SERVICE AND CATCHMENT AREA FOR DEPENDENTS OF ACTIVE DUTY
UNDER AGE 65 RESIDING IN THE SAN ANTONIO SERVICE AREA**

CLINICAL SERVICE	BROOKE AMC		WILFORD HALL USAF MEDICAL CENTER		TOTAL SAN ANTONIO SERVICE AREA	
	DIRECT CARE	TOTAL MISS	DIRECT CARE	TOTAL MISS	DIRECT CARE	TOTAL MISS
MED/PC GROUP						
VISITS/CAPITA	4.978	4.978	4.816	4.848	4.901	4.916
ALLERGY						
VISITS/CAPITA	0.278	0.278	0.137	0.137	0.212	0.212
CARDIOLOGY						
VISITS/CAPITA	0.075	0.075	0.041	0.041	0.059	0.059
DERMATOLOGY						
VISITS/CAPITA	0.236	0.236	0.141	0.141	0.191	0.191
NEUROLOGY						
VISITS/CAPITA	0.050	0.050	0.039	0.039	0.045	0.045
EMERGENCY						
VISITS/CAPITA	0.610	0.822	0.769	1.004	0.685	0.908
GENERAL SURGERY						
VISITS/CAPITA	0.124	0.173	0.126	0.181	0.125	0.177
ORTHOPEDIC SURGERY						
VISITS/CAPITA	0.203	0.244	0.128	0.220	0.167	0.232
OPHTHALMOLOGY						
VISITS/CAPITA	0.072	0.097	0.083	0.106	0.078	0.101
OTOLARYNGOLOGY						
VISITS/CAPITA	0.098	0.146	0.170	0.184	0.132	0.164
UROLOGY						
VISITS/CAPITA	0.041	0.054	0.030	0.051	0.036	0.053
GYNECOLOGY						
VISITS/CAPITA	1.722	1.722	1.994	1.994	1.850	1.850
OBSTETRICS						
VISITS/CAPITA	1.205	1.207	1.732	1.737	1.456	1.460
PSYCHIATRY						
VISITS/CAPITA	0.209	1.008	0.385	1.116	0.292	1.059
OPTOMETRY						
VISITS/CAPITA	0.194	0.194	0.222	0.222	0.207	0.207
ALL CLINICAL AREAS						
VISITS/CAPITA	8.325	9.513	8.568	9.774	8.440	9.636

SOURCE: RAPS UTILIZATION RATE MODULE, VERSION 4.25.

**FY89 OUTPATIENT UTILIZATION RATES BY CLINICAL SERVICE
AND CATCHMENT AREA FOR OTHER BENEFICIARIES UNDER
AGE 65 RESIDING IN THE SAN ANTONIO SERVICE AREA**

CLINICAL SERVICE	BROOKE AMC		WILFORD HALL USAF MEDICAL CENTER		TOTAL SAN ANTONIO SERVICE AREA	
	DIRECT CARE	TOTAL MISS	DIRECT CARE	TOTAL MISS	DIRECT CARE	TOTAL MISS
MED/PC GROUP						
VISITS/CAPITA	4.890	5.088	5.650	5.882	5.241	5.454
ALLERGY						
VISITS/CAPITA	0.362	0.362	0.229	0.229	0.301	0.301
CARDIOLOGY						
VISITS/CAPITA	0.643	0.643	0.397	0.397	0.529	0.529
DERMATOLOGY						
VISITS/CAPITA	0.565	0.565	0.381	0.381	0.480	0.480
NEUROLOGY						
VISITS/CAPITA	0.104	0.104	0.093	0.093	0.099	0.099
EMERGENCY						
VISITS/CAPITA	0.386	0.501	0.466	0.591	0.423	0.542
GENERAL SURGERY						
VISITS/CAPITA	0.314	0.372	0.361	0.412	0.336	0.390
ORTHOPEDIC SURGERY						
VISITS/CAPITA	0.270	0.308	0.193	0.267	0.235	0.289
OPHTHALMOLOGY						
VISITS/CAPITA	0.316	0.364	0.410	0.435	0.359	0.397
OTOLARYNGOLOGY						
VISITS/CAPITA	0.105	0.130	0.206	0.206	0.152	0.165
UROLOGY						
VISITS/CAPITA	0.205	0.233	0.168	0.216	0.188	0.225
GYNECOLOGY						
VISITS/CAPITA	0.394	0.394	0.569	0.569	0.475	0.475
OBSTETRICS						
VISITS/CAPITA	0.199	0.202	0.307	0.309	0.248	0.251
PSYCHIATRY						
VISITS/CAPITA	0.165	0.634	0.358	0.778	0.254	0.701
OPTOMETRY						
VISITS/CAPITA	0.363	0.363	0.624	0.624	0.483	0.483
ALL CLINICAL AREAS						
VISITS/CAPITA	8.908	9.886	9.858	10.835	9.347	10.324

SOURCE: RAPS UTILIZATION RATE MODULE, VERSION 4.25.

**FY89.DIRECT CARE OUTPATIENT UTILIZATION RATES BY
CLINICAL SERVICE AND CATCHMENT AREA FOR BENEFICIARIES
AGE 65 AND OLDER RESIDING IN THE SAN ANTONIO SERVICE AREA**

CLINICAL SERVICE	BHOOKE AMC	WILFORD HALL USAH MEDICAL CENTER	TOTAL SAN ANTONIO SERVICE AREA
MED/PC GROUP VISITS/CAPITA	3.542	4.025	3.738
ALLERGY VISITS/CAPITA	0.369	0.234	0.314
CARDIOLOGY VISITS/CAPITA	0.656	0.404	0.554
DERMATOLOGY VISITS/CAPITA	0.576	0.389	0.500
NEUROLOGY VISITS/CAPITA	0.107	0.095	0.102
EMERGENCY VISITS/CAPITA	0.394	0.475	0.427
GENERAL SURGERY VISITS/CAPITA	0.321	0.368	0.340
ORTHOPEDIC SURGERY VISITS/CAPITA	0.276	0.197	0.244
OPHTHALMOLOGY VISITS/CAPITA	0.322	0.418	0.361
OTOLARYNGOLOGY VISITS/CAPITA	0.108	0.210	0.149
UROLOGY VISITS/CAPITA	0.209	0.172	0.194
GYNECOLOGY VISITS/CAPITA	0.349	0.533	0.422
OBSTETRICS VISITS/CAPITA	0.000	0.000	0.000
PSYCHIATRY VISITS/CAPITA	0.053	0.120	0.080
OPTOMETRY VISITS/CAPITA	0.370	0.636	0.478
ALL CLINICAL AREAS VISITS/CAPITA	7.493	8.018	7.706

SOURCE: RAPS UTILIZATION RATE MODULE, VERSION 4.25.

**FY89 OUTPATIENT UTILIZATION RATES BY CLINICAL SERVICE
AND CATCHMENT AREA FOR ALL BENEFICIARIES
RESIDING IN THE SAN ANTONIO SERVICE AREA**

CLINICAL SERVICE	BROOKE AMC		WILFORD HALL USAF MEDICAL CENTER		TOTAL SAN ANTONIO SERVICE AREA	
	DIRECT CARE	TOTAL MHSS	DIRECT CARE	TOTAL MHSS	DIRECT CARE	TOTAL MHSS
MED/PC GROUP						
VISITS/CAPITA	5.126	5.208	5.678	5.782	5.383	5.475
ALLERGY						
VISITS/CAPITA	0.356	0.356	0.275	0.275	0.319	0.319
CARDIOLOGY						
VISITS/CAPITA	0.406	0.406	0.273	0.273	0.344	0.344
DERMATOLOGY						
VISITS/CAPITA	0.487	0.487	0.476	0.476	0.482	0.482
NEUROLOGY						
VISITS/CAPITA	0.099	0.099	0.139	0.139	0.118	0.118
EMERGENCY						
VISITS/CAPITA	0.485	0.592	0.739	0.859	0.603	0.716
GENERAL SURGERY						
VISITS/CAPITA	0.240	0.277	0.339	0.376	0.286	0.323
ORTHOPEDIC SURGERY						
VISITS/CAPITA	0.353	0.381	0.479	0.536	0.412	0.453
OPHTHALMOLOGY						
VISITS/CAPITA	0.213	0.240	0.312	0.329	0.259	0.281
OTOLARYNGOLOGY						
VISITS/CAPITA	0.108	0.132	0.296	0.300	0.196	0.210
UROLOGY						
VISITS/CAPITA	0.148	0.164	0.158	0.184	0.153	0.173
GYNECOLOGY						
VISITS/CAPITA	0.860	0.860	1.434	1.434	1.123	1.123
OBSTETRICS						
VISITS/CAPITA	0.814	0.816	1.215	1.219	1.004	1.007
PSYCHIATRY						
VISITS/CAPITA	0.275	0.695	1.128	1.512	0.671	1.075
OPTOMETRY						
VISITS/CAPITA	0.360	0.360	0.691	0.691	0.514	0.514
ALL CLINICAL AREAS						
VISITS/CAPITA	9.191	9.931	11.839	12.589	10.423	11.167

SOURCE: RAPS UTILIZATION RATE MODULE, VERSION 4.25.

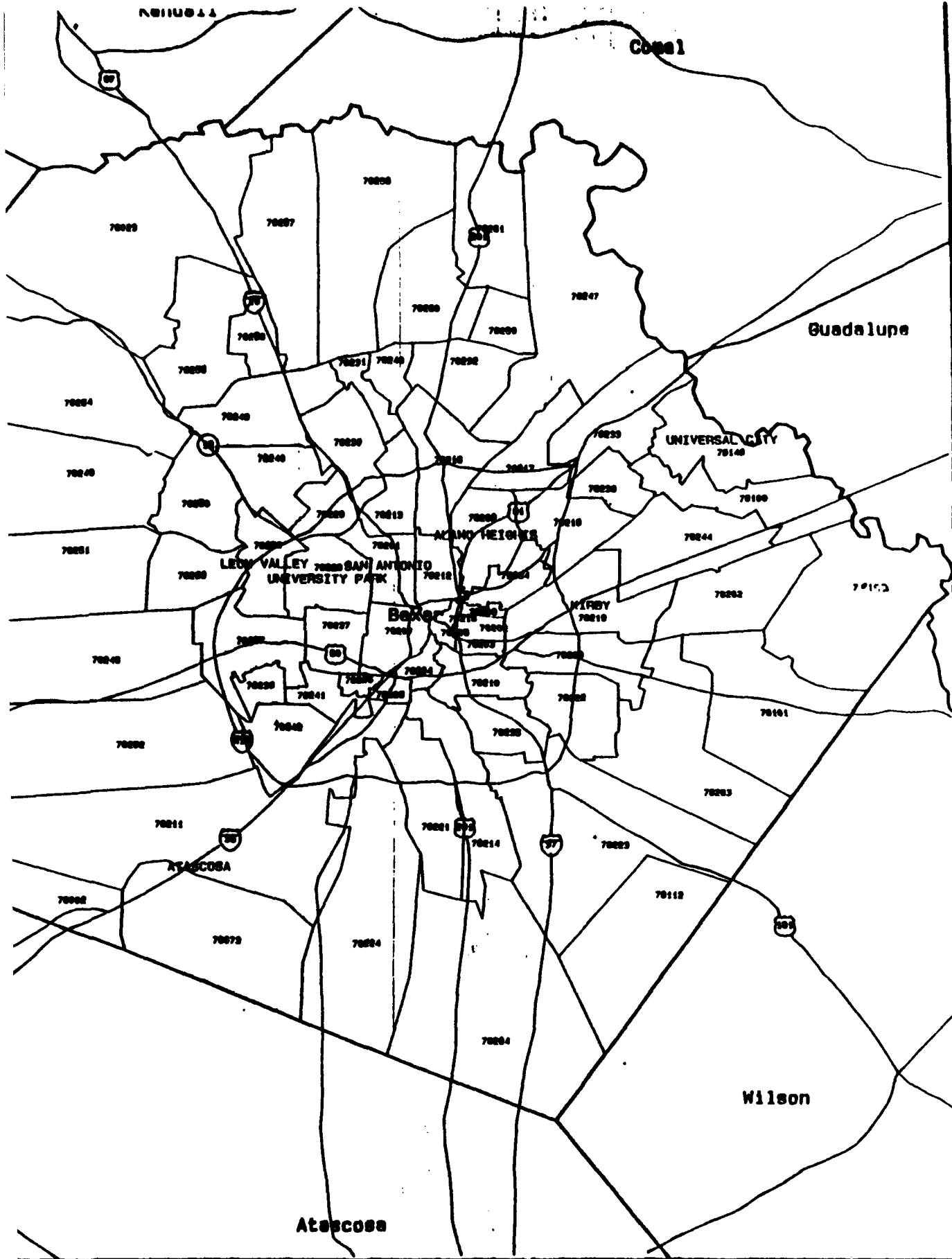
FY92 PRIMARY CARE OUTPATIENT UTILIZATION

	AGE 0 - 18 YEARS				TOTAL		UTIL RATE
	MALE		FEMALE				
	USERS	VISITS	USERS	VISITS	USERS	VISITS	
ACTIVE DUTY	1	1	0	0	1	1	1
RETIRED	0	0	0	0	0	0	ERR
DEPENDENT	1780	3240	2053	4179	3833	7419	1.935
OTHER	4	4	6	7	10	11	1.1
TOTAL	1785	3245	2059	4186	3844	7431	1.933

	AGE 19 - 64 YEARS				TOTAL		UTIL RATE
	MALE		FEMALE				
	USERS	VISITS	USERS	VISITS	USERS	VISITS	
ACTIVE DUTY	2513	6450	1353	4236	3866	10686	2.764
RETIRED	4945	16648	168	493	5113	17141	3.352
DEPENDENT	1104	2670	12002	38086	13106	40756	3.109
OTHER	33	48	98	326	131	374	2.854
TOTAL	8595	25816	13621	43141	22216	68957	3.103

	AGE 65+ YEARS				TOTAL		UTIL RATE
	MALE		FEMALE				
	USERS	VISITS	USERS	VISITS	USERS	VISITS	
ACTIVE DUTY	114	265	25	54	139	319	2.294
RETIRED	2252	8020	69	179	2321	8199	3.532
DEPENDENT	85	226	2513	8402	2598	8628	3.321
OTHER	1	1	15	65	16	66	4.125
TOTAL	2452	8512	2622	8700	5074	17212	3.392

	GRAND TOTAL						UTIL RATE
	MALE		FEMALE		TOTAL		
	USERS	VISITS	USERS	VISITS	USERS	VISITS	
ACTIVE DUTY	2628	6716	1378	4290	4006	11006	2.747
RETIRED	7197	24668	237	672	7434	25340	3.408
DEPENDENT	2969	6136	16568	50667	19537	56803	2.907
OTHER	38	53	119	398	157	451	2.872
TOTAL	12832	37573	18302	56027	31134	93600	3.006



- County Highways
- State Highways
- US Highways
- Interstate Highways

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SAN ANTONIO SERVICE AREA CHAMPUS COST - FY90

SAN ANTONIO CATCHMENT Clinical Service	TOTAL CHAMPUS PROGRAM Inpatient Services			Govt # Govt #	Govt \$ Per Adm	Govt \$ Per Day
	Users	Adm	Days			
Adverse Reactions	28	11	40	\$27,761	\$2,524	\$694.03
Allergy	30	10	34	\$26,262	\$2,626	\$772.41
Cardiology (Vasc Dis)	176	54	369	\$564,850	\$10,460	\$1,530.76
Dermatology	23	1	2	\$4,066	\$4,066	\$2,033.00
Endocrinology	27	4	15	\$11,576	\$2,894	\$771.73
Gastroenterology	90	27	128	\$74,917	\$2,775	\$585.29
Hematology	18	6	84	\$44,423	\$7,404	\$528.85
Infectious Disease	23	5	41	\$25,036	\$5,007	\$610.63
Nephrology	11	3	18	\$10,818	\$3,606	\$601.00
Neurology	168	18	253	\$236,479	\$13,138	\$934.70
Nutritional	11	1	3	\$5,335	\$5,335	\$1,778.33
Pulmonary/Respiratory	174	46	246	\$253,685	\$5,515	\$1,031.24
Rheumatology	13	6	34	\$27,771	\$4,629	\$816.79
Internal Medicine (Other)	102	24	69	\$38,424	\$1,601	\$556.87
Dental	1	0	0	\$935	ERR	ERR
Obstetrics	333	20	65	\$67,635	\$3,382	\$1,040.54
Gynecology	55	12	37	\$34,152	\$2,846	\$923.03
Ophthalmology	31	3	14	\$42,196	\$14,065	\$3,014.00
Psychiatry (Gp I)	738	491	28,123	\$11,476,660	\$23,374	\$408.09
Psychiatry (Gp II)	660	442	25,113	\$10,130,521	\$22,920	\$403.40
Special Peds	30	1	42	\$37,697	\$37,697	\$897.55
Ear, Nose, and Throat	41	6	9	\$20,447	\$3,408	\$2,271.89
General Surgery	173	78	1,102	\$989,517	\$12,686	\$897.93
Neurosurgery	43	14	172	\$233,772	\$16,698	\$1,359.14
Orthopedics	127	17	257	\$291,104	\$17,124	\$1,132.70
Thoracic Surgery	5	2	8	\$7,155	\$3,578	\$894.38
Urology	43	10	29	\$27,854	\$2,785	\$960.48
TOTALS	2,152	1,312	56,307	\$24,711,045	\$18,835	\$438.86

SAN ANTONIO SERVICE AREA CHAMPUS COST - FY90

SAN ANTONIO CATCHMENT		CHAMPUS NET OF INTERNAL PARTNERSHIP PROGRAM				
Clinical Service	Inpatient Services			Govt #		Govt #
	Users	Adm	Days	Govt #	Per Adm	Per Day
Adverse Reactions	28	11	40	\$27,761	\$2,524	\$694.03
Allergy	30	10	34	\$26,262	\$2,626	\$772.41
Cardiology (Vasc Dis)	171	54	369	\$564,353	\$10,451	\$1,529.41
Dermatology	19	1	2	\$3,957	\$3,957	\$1,978.50
Endocrinology	25	4	15	\$11,524	\$2,881	\$768.27
Gastroenterology	86	27	128	\$73,915	\$2,738	\$577.46
Hematology	18	6	84	\$44,423	\$7,404	\$528.85
Infectious Disease	23	5	41	\$25,036	\$5,007	\$610.63
Nephrology	11	3	18	\$10,818	\$3,606	\$601.00
Neurology	166	18	253	\$236,414	\$13,134	\$934.44
Nutritional	10	1	3	\$4,866	\$4,866	\$1,622.00
Pulmonary/Respiratory	168	46	246	\$253,505	\$5,511	\$1,030.51
Rheumatology	12	6	34	\$27,745	\$4,624	\$816.03
Internal Medicine (Other)	99	24	69	\$38,238	\$1,593	\$554.17
Dental	1	0	0	\$935	ERR	ERR
Obstetrics	82	20	65	\$54,718	\$2,736	\$841.82
Gynecology	54	12	37	\$34,126	\$2,844	\$922.32
Ophthalmology	18	3	14	\$16,982	\$5,661	\$1,213.00
Psychiatry (Gp I)	735	491	28,123	\$11,476,539	\$23,374	\$408.08
Psychiatry (Gp II)	659	442	25,113	\$10,130,237	\$22,919	\$403.39
Special Peds	28	1	42	\$37,648	\$37,648	\$896.38
Ear, Nose, and Throat	30	6	9	\$20,023	\$3,337	\$2,224.78
General Surgery	170	78	1,102	\$989,372	\$12,684	\$897.80
Neurosurgery	43	14	172	\$233,772	\$16,698	\$1,359.14
Orthopedics	120	17	257	\$290,606	\$17,094	\$1,130.76
Thoracic Surgery	5	2	8	\$7,155	\$3,578	\$894.38
Urology	40	10	29	\$27,706	\$2,771	\$955.38
TOTALS	1,829	1,312	56,307	\$24,668,634	\$18,802	\$438.11

SAN ANTONIO SERVICE AREA CHAMPUS COSTS - FY 1991

SAN ANTONIO CATCHMENT Clinical Service	TOTAL CHAMPUS PROGRAM Inpatient Services			Govt \$ Govt \$	Govt \$ Per Adm	Govt \$ Per Day
	Users	Adm	Days			
Adverse Reactions	40	16	32	\$46,546	\$2,909	\$1,454.56
Allergy	50	4	19	\$10,344	\$2,586	\$544.42
Cardiology (Vasc Dis)	302	104	638	\$1,232,566	\$11,852	\$1,931.92
Dermatology	42	2	4	\$8,534	\$4,267	\$2,133.50
Endocrinology	40	4	45	\$19,865	\$4,966	\$441.44
Gastroenterology	109	15	99	\$323,583	\$21,572	\$3,268.52
Hematology	63	6	31	\$24,864	\$4,144	\$802.06
Infectious Disease	24	7	73	\$64,990	\$9,284	\$890.27
Nephrology	26	6	52	\$23,365	\$3,894	\$449.33
Neurology	288	26	355	\$345,010	\$13,270	\$971.86
Nutritional	10	1	67	\$23,067	\$23,067	\$344.28
Pulmonary/Respiratory	261	55	1,135	\$1,238,314	\$22,515	\$1,091.03
Rheumatology	45	10	49	\$47,228	\$4,723	\$963.84
Internal Medicine (Other)	202	18	183	\$336,018	\$18,668	\$1,836.16
Dental	2	2	40	\$17,345	\$8,673	\$433.63
Obstetrics	521	14	24	\$100,743	\$7,196	\$4,197.63
Gynecology	158	5	21	\$82,987	\$16,597	\$3,951.76
Ophthalmology	90	4	14	\$149,335	\$37,334	\$10,666.79
Psychiatry (Gp I)	938	799	38,450	\$16,651,359	\$20,840	\$433.07
Psychiatry (Gp II)	662	441	23,912	\$10,304,860	\$23,367	\$430.95
Special Peds	42	1	85	\$115,978	\$115,978	\$1,364.45
Ear, Nose, and Throat	83	3	13	\$32,666	\$10,889	\$2,512.77
General Surgery	334	93	1,594	\$1,817,841	\$19,547	\$1,140.43
Neurosurgery	72	16	312	\$316,137	\$19,759	\$1,013.26
Orthopedics	203	33	773	\$747,030	\$22,637	\$966.40
Thoracic Surgery	15	4	25	\$22,580	\$5,645	\$903.20
Urology	129	10	51	\$65,011	\$6,501	\$1,274.73
TOTALS	3,138	1,699	68,096	\$34,168,166	\$20,111	\$501.76

SAN ANTONIO SERVICE AREA CHAMPUS COSTS - FY 1991

SAN ANTONIO CATCHMENT		CHAMPUS NET OF INTERNAL PARTNERSHIP PROGRAM				
Clinical Service	Inpatient Services			Govt \$	Govt \$	Govt \$
	Users	Adm	Days		Per Adm	Per Day
Adverse Reactions	40	16	32	\$46,546	\$2,909	\$1,454.56
Allergy	48	4	19	\$10,280	\$2,570	\$541.05
Cardiology (Vasc Dis)	299	104	638	\$1,232,341	\$11,849	\$1,931.57
Dermatology	35	2	4	\$7,586	\$3,793	\$1,896.50
Endocrinology	31	4	45	\$19,159	\$4,790	\$425.76
Gastroenterology	103	15	99	\$322,081	\$21,472	\$3,253.34
Hematology	62	6	31	\$24,668	\$4,111	\$795.74
Infectious Disease	21	7	73	\$64,847	\$9,264	\$888.32
Nephrology	24	6	52	\$22,748	\$3,791	\$437.46
Neurology	277	26	355	\$343,634	\$13,217	\$967.98
Nutritional	10	1	67	\$23,067	\$23,067	\$344.28
Pulmonary/Respiratory	257	55	1,135	\$1,237,778	\$22,505	\$1,090.55
Rheumatology	39	10	49	\$45,648	\$4,565	\$931.59
Internal Medicine (Other)	198	18	183	\$328,740	\$18,263	\$1,796.39
Dental	2	2	40	\$17,345	\$8,673	\$433.63
Obstetrics	129	14	24	\$80,883	\$5,777	\$3,370.13
Gynecology	77	5	21	\$57,607	\$11,521	\$2,743.19
Ophthalmology	29	4	14	\$32,633	\$8,158	\$2,330.93
Psychiatry (Gp I)	932	799	38,450	\$16,649,035	\$20,837	\$433.00
Psychiatry (Gp II)	660	441	23,912	\$10,304,660	\$23,367	\$430.94
Special Peds	41	1	85	\$115,812	\$115,812	\$1,362.49
Ear, Nose, and Throat	46	3	13	\$15,760	\$5,253	\$1,212.31
General Surgery	268	93	1,594	\$1,798,781	\$19,342	\$1,128.47
Neurosurgery	68	16	312	\$306,439	\$19,152	\$982.18
Orthopedics	178	33	773	\$741,417	\$22,467	\$959.14
Thoracic Surgery	15	4	25	\$22,580	\$5,645	\$903.20
Urology	83	10	51	\$54,966	\$5,497	\$1,077.76
TOTALS	2,363	1,699	68,096	\$33,927,041	\$19,969	\$498.22

SAN ANTONIO SERVICE AREA CHAMPUS COST - FY90

SAN ANTONIO CATCHMENT

Clinical Service	Outpatient Services		Govt #		Total Govt Cost
	Users	Visits	Govt #	Per Vis	
=====	=====	=====	=====	=====	=====
Adverse Reactions	730	912	\$51,114	\$56.05	\$78,875
Allergy	2,300	4,508	\$177,388	\$39.35	\$203,650
Cardiology (Vasc Dis)	2,723	5,261	\$352,388	\$66.98	\$917,238
Dermatology	3,852	4,816	\$281,716	\$58.50	\$285,782
Endocrinology	1,167	2,330	\$108,221	\$46.45	\$119,797
Gastroenterology	3,362	4,643	\$360,926	\$77.74	\$435,843
Hematology	437	803	\$48,205	\$60.03	\$92,628
Infectious Disease	2,520	2,934	\$103,636	\$35.32	\$128,672
Nephrology	103	400	\$42,502	\$106.26	\$53,320
Neurology	1,726	4,208	\$415,395	\$98.72	\$651,874
Nutritional	45	366	\$71,655	\$195.78	\$76,990
Pulmonary/Respiratory	7,390	10,231	\$510,966	\$49.94	\$764,651
Rheumatology	1,272	2,503	\$119,736	\$47.84	\$147,507
Internal Medicine (Other)	3,030	3,801	\$223,262	\$58.74	\$261,686
Dental	264	288	\$11,927	\$41.41	\$12,862
Obstetrics	142	109	\$12,498	\$114.66	\$80,133
Gynecology	2,313	2,721	\$201,260	\$73.97	\$235,412
Ophthalmology	3,603	5,352	\$474,895	\$88.73	\$517,091
Psychiatry (Gp I)	3,329	36,648	\$2,299,481	\$62.75	\$13,776,141
Psychiatry (Gp II)	2,881	27,231	\$1,714,523	\$62.96	\$11,845,044
Special Peds	668	1,123	\$386,435	\$344.11	\$424,132
Ear, Nose, and Throat	11,467	18,978	\$793,882	\$41.83	\$814,329
General Surgery	3,097	3,944	\$374,218	\$94.88	\$1,363,735
Neurosurgery	224	622	\$56,601	\$91.00	\$290,373
Orthopedics	5,279	11,557	\$657,957	\$56.93	\$949,061
Thoracic Surgery	42	81	\$17,090	\$210.99	\$24,245
Urology	2,510	3,180	\$193,839	\$60.96	\$221,693
=====	=====	=====	=====	=====	=====
TOTALS	41,862	159,550	\$10,061,715	\$63.06	\$34,772,764

SAN ANTONIO SERVICE AREA CHAMPUS COST - FY90

SAN ANTONIO CATCHMENT

Clinical Service	Outpatient Services		Govt #		TOTAL GOVT CHAMPUS # W/O PARTNERS
	Users	Visits	Govt #	Per Vis	
Adverse Reactions	301	469	\$35,672	\$76.06	\$63,433
Allergy	550	1,929	\$79,814	\$41.38	\$106,076
Cardiology (Vasc Dis)	862	2,474	\$250,255	\$101.15	\$814,608
Dermatology	977	1,533	\$116,475	\$75.98	\$120,432
Endocrinology	351	924	\$59,221	\$64.09	\$70,745
Gastroenterology	702	1,219	\$237,573	\$194.89	\$311,488
Hematology	113	406	\$35,259	\$86.84	\$79,682
Infectious Disease	306	485	\$26,685	\$55.02	\$51,721
Nephrology	50	338	\$39,964	\$118.24	\$50,782
Neurology	872	3,116	\$371,181	\$119.12	\$607,595
Nutritional	21	340	\$70,849	\$208.38	\$75,715
Pulmonary/Respiratory	1,104	2,099	\$235,234	\$112.07	\$488,739
Rheumatology	336	1,311	\$74,238	\$56.63	\$101,983
Internal Medicine (Other)	744	1,229	\$98,994	\$80.55	\$137,232
Dental	35	51	\$4,751	\$93.16	\$5,686
Obstetrics	57	21	\$8,545	\$406.90	\$63,263
Gynecology	779	1,108	\$119,036	\$107.43	\$153,162
Ophthalmology	777	1,807	\$276,816	\$153.19	\$293,798
Psychiatry (Gp I)	2,821	34,722	\$2,171,915	\$62.55	\$13,648,454
Psychiatry (Gp II)	2,434	25,276	\$1,589,380	\$62.88	\$11,719,617
Special Peds	292	632	\$369,753	\$585.05	\$407,401
Ear, Nose, and Throat	1,300	3,974	\$349,771	\$88.01	\$369,794
General Surgery	1,316	1,956	\$299,244	\$152.99	\$1,288,616
Neurosurgery	160	551	\$53,870	\$97.77	\$287,642
Orthopedics	1,395	5,752	\$438,006	\$76.15	\$728,612
Thoracic Surgery	34	73	\$16,778	\$229.84	\$23,933
Urology	711	925	\$113,722	\$122.94	\$141,428
TOTALS	9,765	94,720	\$7,543,003	\$79.63	\$32,211,637

SAN ANTONIO SERVICE AREA CHAMPUS COSTS - FY 1991

SAN ANTONIO CATCHMENT

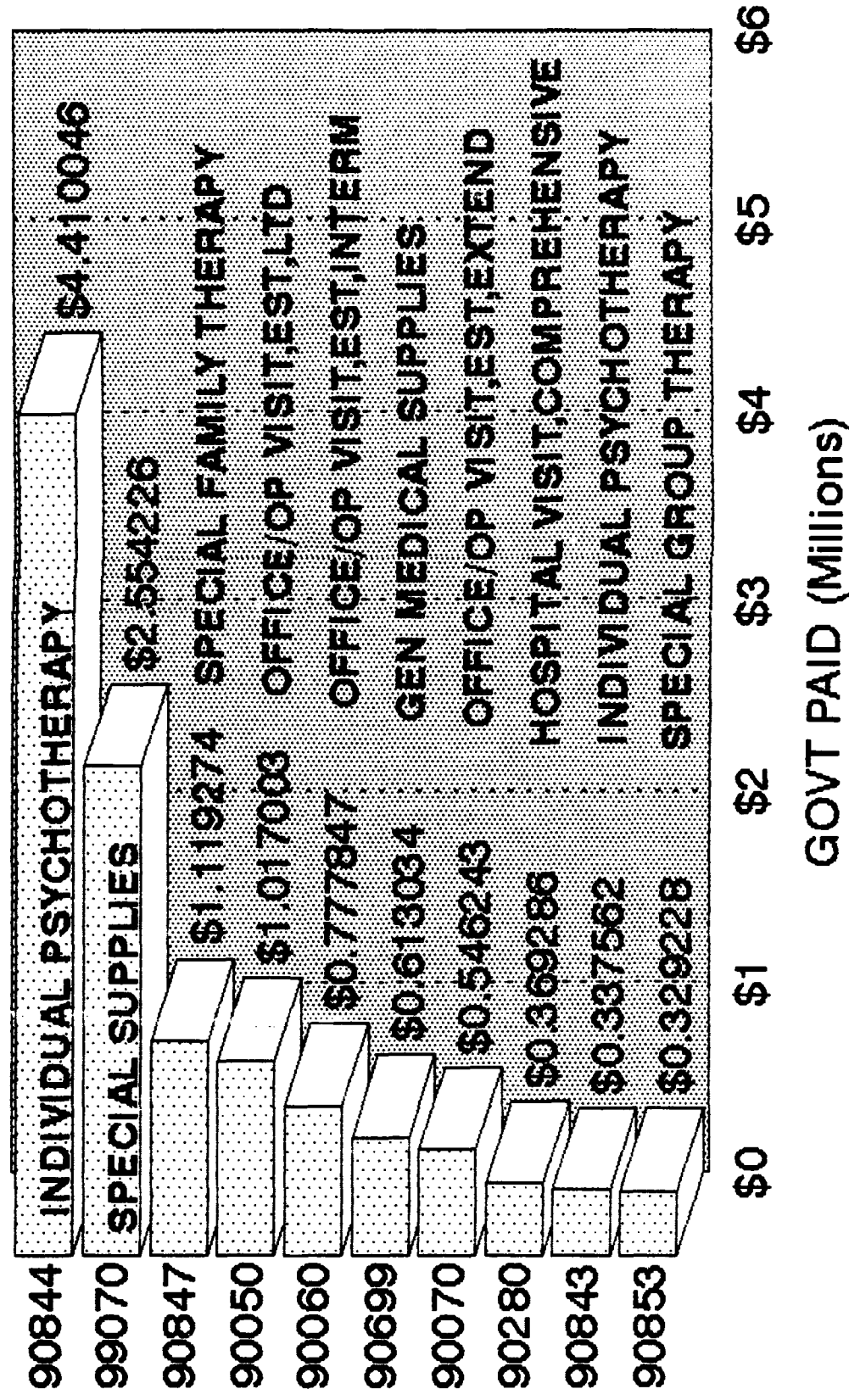
Clinical Service	Outpatient Services		Govt #		Total Govt Cost
	Users	Visits	Govt #	Per Vis	
Adverse Reactions	917	849	\$82,547	\$97.23	\$129,093
Allergy	3,455	6,531	\$245,813	\$37.64	\$256,157
Cardiology (Vasc Dis)	3,672	6,838	\$488,317	\$71.41	\$1,720,883
Dermatology	5,310	6,740	\$418,979	\$62.16	\$427,513
Endocrinology	1,753	3,054	\$162,461	\$53.20	\$182,326
Gastroenterology	4,572	5,979	\$699,881	\$117.06	\$1,023,464
Hematology	571	1,057	\$76,323	\$72.21	\$101,187
Infectious Disease	2,970	3,404	\$142,669	\$41.91	\$207,659
Nephrology	135	1,756	\$104,162	\$59.32	\$127,527
Neurology	2,092	5,808	\$608,264	\$104.73	\$953,274
Nutritional	74	113	\$40,101	\$354.88	\$63,168
Pulmonary/Respiratory	9,528	12,844	\$795,990	\$61.97	\$2,034,304
Rheumatology	1,453	3,214	\$170,210	\$52.96	\$217,438
Internal Medicine (Other)	4,906	6,115	\$434,078	\$70.99	\$770,096
Dental	234	247	\$9,672	\$39.16	\$27,017
Obstetrics	54	44	\$6,299	\$143.16	\$107,042
Gynecology	4,233	4,863	\$444,955	\$91.50	\$527,942
Ophthalmology	4,426	6,809	\$627,455	\$92.15	\$776,790
Psychiatry (Gp I)	3,904	43,212	\$2,751,042	\$63.66	\$19,402,401
Psychiatry (Gp II)	3,524	30,947	\$1,974,352	\$63.80	\$12,279,212
Special Peds	791	1,970	\$221,254	\$112.31	\$337,232
Ear, Nose, and Throat	13,661	22,743	\$1,031,223	\$45.34	\$1,063,889
General Surgery	4,326	5,409	\$964,151	\$178.25	\$2,781,992
Neurosurgery	319	1,032	\$100,875	\$97.75	\$417,012
Orthopedics	7,533	18,119	\$1,129,500	\$62.34	\$1,876,530
Thoracic Surgery	86	139	\$41,123	\$295.85	\$63,703
Urology	3,520	4,304	\$324,545	\$75.41	\$389,556
TOTALS	52,045	204,140	\$14,096,236	\$69.05	\$48,264,407

SAN ANTONIO SERVICE AREA CHAMPUS COSTS - FY 1991

SAN ANTONIO CATCHMENT					TOTAL GOVT CHAMPUS #
Clinical Service	Outpatient Services		Govt #	Govt #	W/O PARTNERS
	Users	Visits	Govt #	Per Vis	
Adverse Reactions	408	332	\$65,639	\$197.71	\$112,185
Allergy	615	2,512	\$105,875	\$42.15	\$116,155
Cardiology (Vasc Dis)	977	2,377	\$350,915	\$147.63	\$1,583,256
Dermatology	995	1,585	\$140,283	\$88.51	\$147,869
Endocrinology	366	994	\$76,573	\$77.04	\$95,732
Gastroenterology	876	1,258	\$557,761	\$443.37	\$879,842
Hematology	149	545	\$56,806	\$104.23	\$81,474
Infectious Disease	320	414	\$42,378	\$102.36	\$107,225
Nephrology	67	1,686	\$100,975	\$59.89	\$123,723
Neurology	901	4,312	\$549,246	\$127.38	\$892,880
Nutritional	29	54	\$37,913	\$702.09	\$60,980
Pulmonary/Respiratory	1,265	2,463	\$497,806	\$202.11	\$1,735,584
Rheumatology	382	1,842	\$127,923	\$69.45	\$173,571
Internal Medicine (Other)	1,435	1,976	\$226,507	\$114.63	\$555,247
Dental	49	53	\$4,229	\$79.79	\$21,574
Obstetrics	16	6	\$4,516	\$752.67	\$85,399
Gynecology	781	1,141	\$226,234	\$198.28	\$283,841
Ophthalmology	763	1,748	\$367,708	\$210.36	\$400,341
Psychiatry (Gp I)	3,015	38,713	\$2,466,277	\$63.71	\$19,115,312
Psychiatry (Gp II)	2,503	26,952	\$1,742,429	\$64.65	\$12,047,089
Special Peds	297	1,305	\$202,216	\$154.95	\$318,028
Ear, Nose, and Throat	1,255	3,300	\$453,908	\$137.55	\$469,668
General Surgery	1,770	2,440	\$861,199	\$352.95	\$2,659,980
Neurosurgery	207	900	\$94,907	\$105.45	\$401,346
Orthopedics	1,674	8,974	\$827,377	\$92.20	\$1,568,794
Thoracic Surgery	65	116	\$29,877	\$257.56	\$52,457
Urology	780	954	\$213,263	\$223.55	\$268,229
TOTALS	9,555	108,952	\$10,430,735	\$95.74	\$44,357,776

San Antonio Service Area

Outpatient CHAMPUS FY91

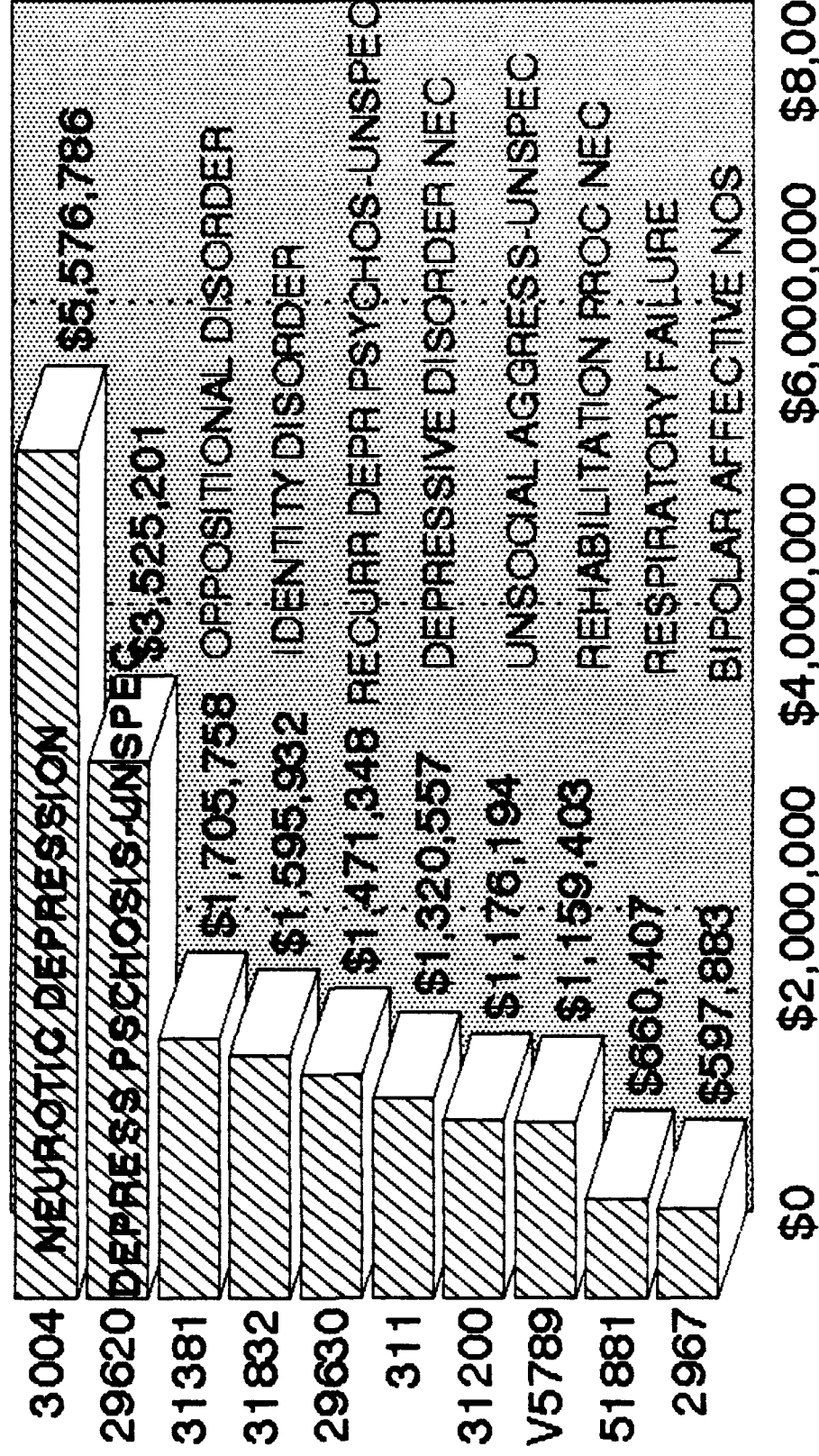


. Source: OCHAMPUS FY91

San Antonio Service Area

Inpatient CHAMPUS FY91

APPENDIX 30



GOVT PAID

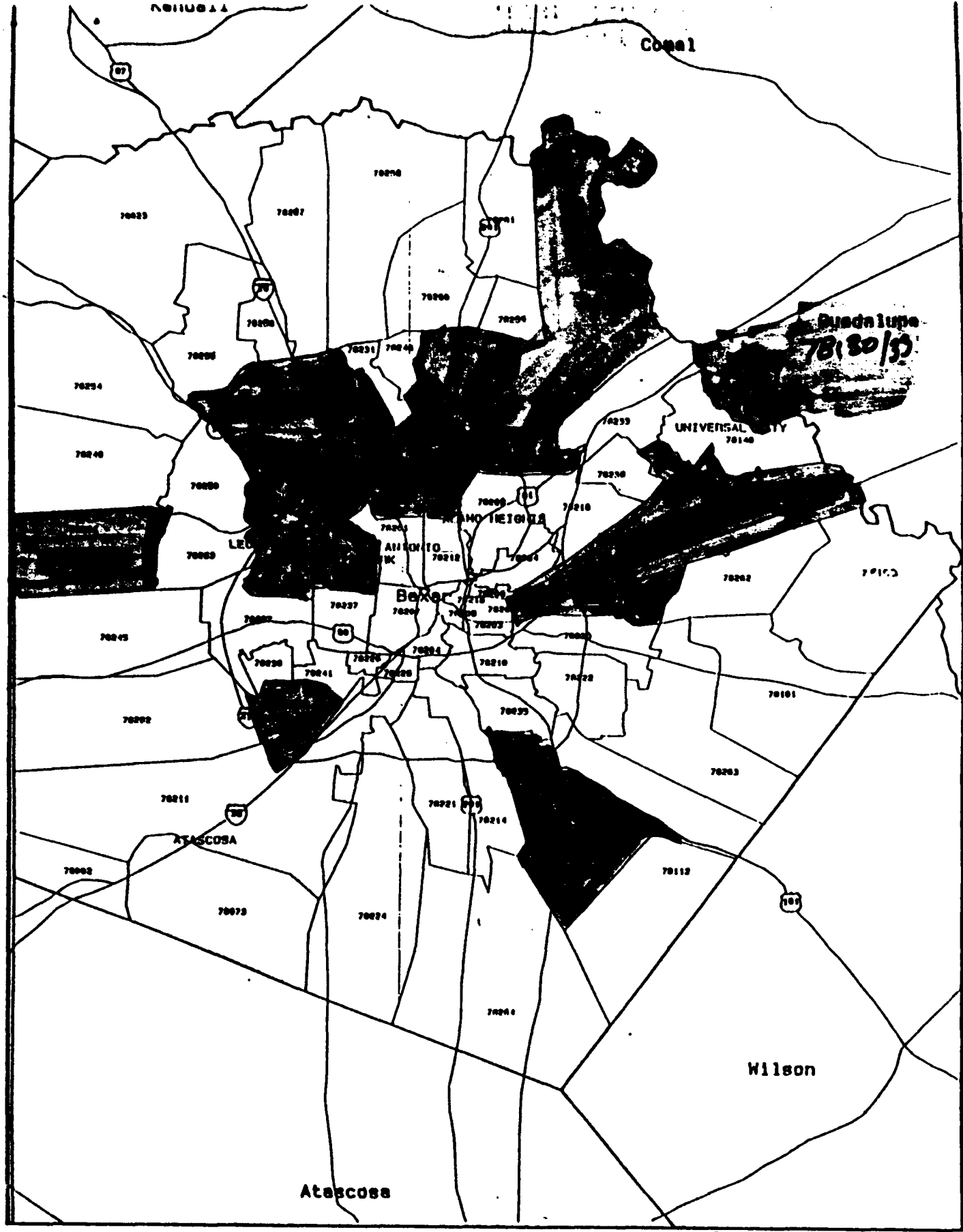
Source: RCMAS FY91

PCM Staffing Component

APPENDIX 31

SPECIALTY	DIRECT CARE CAPACITY	MODEL TARGET	INDIRECT CARE REQUIREMENT
Primary care	65	78	0
Flight Med	15		
Internists	23		
Pediatrics	32	23	0

.Assuming 100% Beneficiary Enrollment and 1:1,700 Ratio



<2000
 >5000

SAN ANTONIO SERVICE AREA BENEFICIARY ORIGIN

Comal

Guadalupe

UNIVERSAL CITY

RANDOLPH

LEON VALLEY
UNIVERSITY PARK

BEXAR

WIRRY

FT SAM
(BAMC)

LACKLAND
(UNMC)

KELLY

Brooks Irb

Wilson

Atascosa

- County Highways
- State Highways
- US Highways
- Interstate Highways

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SAN ANTONIO SERVICE AREA
PRIMARY CARE ASSESSMENT
DIRECT CARE SYSTEM

	KELLY	BROOKS	RANDOLPH	WHMC	**	6612	BAMC	TOTALS	
PRIMARY CARE									
PHYSICIANS (MIL)	5	2	5	7	1	4	6	29	
PHYSICIANS (CIV)	1			1	1		1	3	
PAs (MIL)	3	1	5	4	1	7	10	30	
PAs (CIV)	1			1	1			2	
NPs (MIL)			1					1	
NPs (CIV)								0	
VISITS	31,784	20,484	50,378	54,384		69,162	168,310	394,502	
FTEs	63.24	35.77	81.85	88.22		112.27		381.35	
PARTNERS VISITS	3,718	1,931	22,018	38,942				66,609	
PARTNER FTEs	8.62	1.90	37.02	48.55				96.09	
TOTAL PROVIDERS	10	3	11	13	4	11	17	65	56 ** 6,069
PEDIATRICS									
PHYSICIANS (MIL)			2	3			18	23	
PHYSICIANS (CIV)							4	4	
PAs (MIL)								0	
PAs (CIV)								0	
NPs (MIL)	1		2	2				5	
NPs (CIV)								0	
RESIDENTS				20			9	29	
VISITS	5,208		13,872	67,468			52,547	139,095	
FTEs	10.20		27.24	258.34				296	
PARTNERS VISITS				357			13,697	14,054	
PARTNER FTEs								0	
TOTAL PROVIDERS	1	0	4	5		0	22	32	4,347
INTERNAL MEDICINE									
PHYSICIANS (MIL)				6			10	16	
PHYSICIANS (CIV)				1			2	3	
PAs (MIL)								0	
PAs (CIV)								0	
NPs (MIL)							3	3	
NPs (CIV)							1	1	
RESIDENTS				43			21	64	
VISITS			736	36,649			66,139	103,524	
FTEs			2.73	170.45				173	
PARTNERS VISITS							2,010	2010	
PARTNER FTEs								0	
TOTAL PROVIDERS	0	0	0	7		0	16	23	4,501

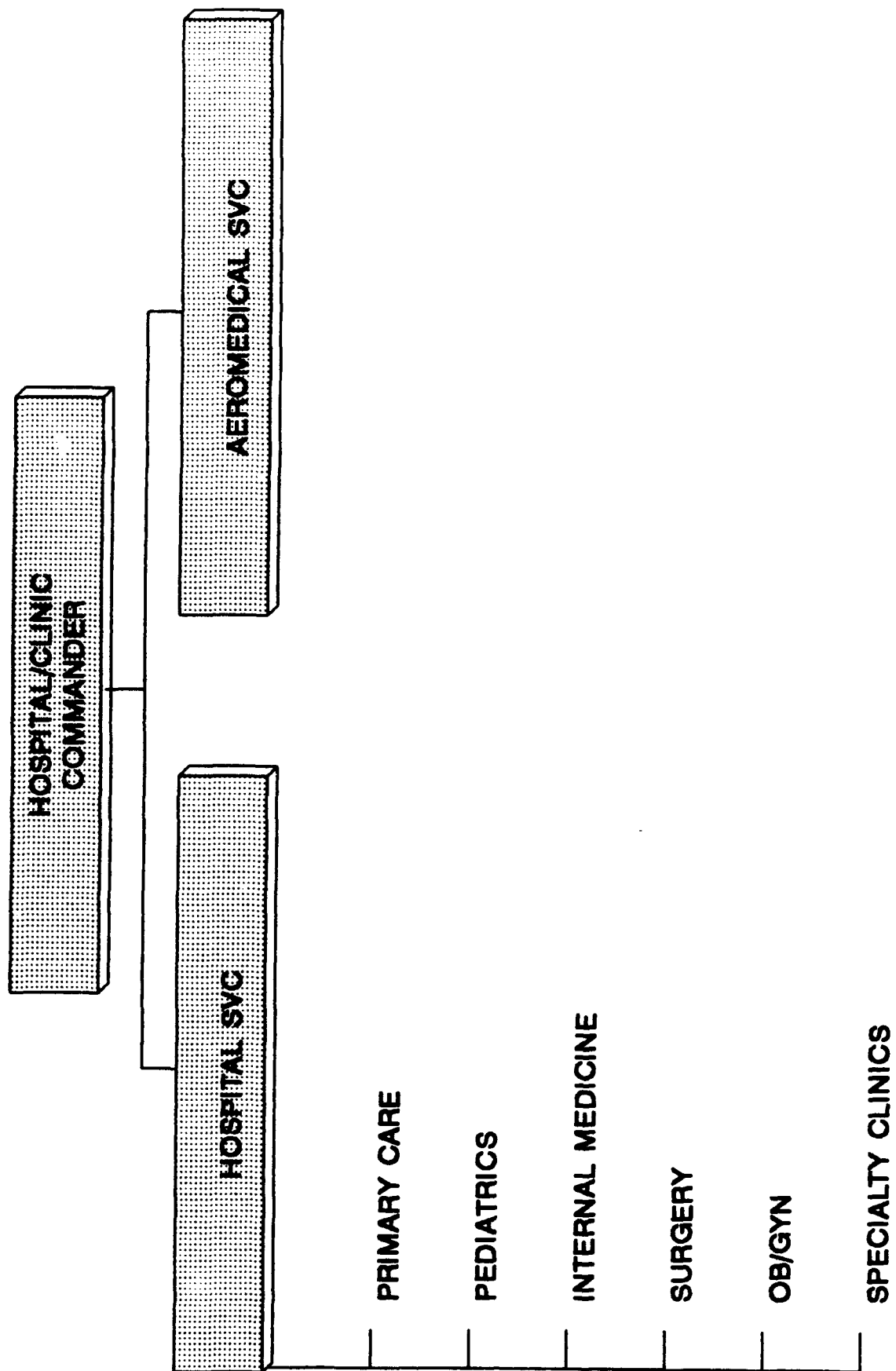
SAN ANTONIO SERVICE AREA
PRIMARY CARE ASSESSMENT
DIRECT CARE SYSTEM

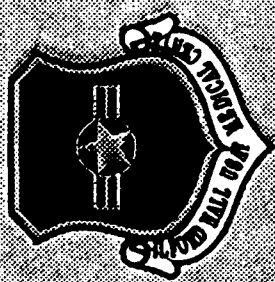
	KELLY	BROOKS	RANDOLPH	WEMC **	6612	BAMC	TOTALS	
FLIGHT MEDICINE								
PHYSICIANS (MIL)	2	1	3		6	3	15	
PHYSICIANS (CIV)							0	
PAs (MIL)							0	
PAs (CIV)							0	
NPs (MIL)							0	
NPs (CIV)							0	
VISITS	2,555	4,053	8,831		20,190	1,986	37,615	
FTEs	14.32	6.69	31.68		48.51		101.2	
PARTNERS VISITS							0	
PARTNER FTEs							0	
TOTAL PROVIDERS	2	1	3	0	6	3	15	2,508
OCCUPATIONAL MEDICINE								
PHYSICIANS (MIL)	4						4	
PHYSICIANS (CIV)	1						1	
PAs (MIL)							0	
PAs (CIV)							0	
NPs (MIL)							0	
NPs (CIV)							0	
VISITS	11,925						11,925	
FTEs	41.64						41.64	
PARTNERS VISITS							0	
PARTNER FTEs							0	
TOTAL PROVIDERS	5	0	0	0	0	0	5	2,385
GRAND TOTAL (EXCLUDING OCC MED)							135	126 **
							674,736	4,998

* Internist located at 6612

** WEMC PCC will lose almost all of their Primary Care Providers
These are the providers that will remain.

TYPICAL ORGANIZATIONAL CHART:





Proposed Organizational Structure



San Antonio Health Care Coordinating Council

